

(1) Graduation Requirements (卒業要件)

Course Classifications 授業科目分類		Department of Chemistry and Biotechnology 化学生命工学科			
		Chemistry 化学系プログラム			
		Compulsory 必修	Compulsory Elective 選必	Elective 選択	Total 合計
Courses relating to a specialized field 工学部専門系科目	Basic Specialized Courses (専門基礎科目)				
	Number of Credits Offered (開講単位数)	28		35	63
	Minimum Credits Required (取得要求単位数)	28		16	44
	Specialized Courses (専門科目)				
	Number of Credits Offered (開講単位数)	10		22	32
	Graduation Research (卒業研究)	10		0	10
	Minimum Credits Required (取得要求単位数)	20		18	38
	Related Specialized Courses (関連専門科目)				
	Number of Credits Offered (開講単位数)			8	8
	Minimum Credits Required (取得要求単位数)			3	3
Total (小計)					
Number of Credits Offered (開講単位数)	38		65	103	
Graduation Research (卒業研究)	10			10	
Minimum Credits Required (取得要求単位数)	48		37	85	
Method of Completion (履修方法)	Compulsory 38 credits (必修 38単位) Graduation Research 10 credits (卒業研究 10単位) Elective at least 37 credits (選択 37単位以上) Total at least 85 credits (合計 85単位以上)				
Liberal Arts and Sciences 全学教育科目	Basic General Education Courses (全学基礎科目)	at least 16 credits (16単位以上)			
	First Year Seminar (基礎セミナー)	at least 2 credits (2単位以上)			
	Language and Culture (言語文化)	at least 12 credits (12単位以上)			
	Japanese, German, French, Russian, Chinese, Spanish, Korean (日本語, ドイツ語, フランス語, ロシア語, 中国語, スペイン語, 朝鮮・韓国語)	at least 12 credits (12単位以上)			
	Health and Sports Sciences (健康・スポーツ科学)	at least 2 credits (2単位以上)			
	Basic Courses in Humanities and Social Sciences (文系基礎科目)	at least 4 credits (4単位以上)			
	Liberal Education Courses in Humanities and Social Sciences (文系教養科目)				
	Basic Courses in Natural Sciences (理系基礎科目)	at least 21 credits (21単位以上)			
	Mathematics (数学関係) Physics (物理学関係) Chemistry (化学関係) Biology (生物学関係) Earth science (地球科学関係)	Must acquire a total of at least 8 credits from Calculus I, II, Linear Algebra I, II or Complex Analysis. A total of 7.5 credits from Fundamentals of Physics I, II, III and Laboratory in Physics are compulsory. A total of 5.5 credits from Fundamentals of Chemistry I, II, Laboratory in Chemistry are compulsory. (微積分学 I, II, 線形代数学 I, II, 複素関数論から計8単位以上, 物理学基礎 I, II, III, 物理学実験の7.5単位は必修。化学基礎 I, II, 化学実験の計5.5単位は必修。)			
	Liberal Education Courses in Natural Sciences (理系教養科目)	at least 4 credits (4単位以上)			
Liberal Education Courses in Interdisciplinary Fields (全学教養科目)	at least 2 credits (2単位以上)				
Method of Completion (履修方法)	Total at least 47 credits (合計 47単位以上)				
Credits required for Graduation (卒業必要単位数)	at least 132 credits (132単位以上)				

(2) Advancement Requirements (進級要件)

Assessment year 判定年次	Course Categories (科目区分)	Minimum Courses/Credits Required (最低必要科目数/単位数)	Requirements (条件等)
At the end of the 1st grade (1年終了時)	Basic Courses in Natural Sciences (理系基礎科目)	5 Subjects (5科目)	Must acquire credits for at least 5 subjects from Basic Courses in Natural Sciences. 理系基礎科目を5科目以上修得すること。
At the end of the 2nd grade (2年終了時)	Basic General Education Courses, Basic Courses in Humanities and Social Sciences, Liberal Education Courses in Humanities and Social Sciences, Basic Courses in Natural Sciences, Liberal Education Courses in Humanities and Social Sciences, Liberal Education Courses in Interdisciplinary Fields (全学基礎科目, 文系基礎科目, 文系教養科目, 理系基礎科目, 理系教養科目, 全学教養科目)	41 credits (41単位)	1 Basic General Education Courses (一 全学基礎科目) Must acquire a total of at least 10.5 "Language and Culture" credits from Japanese, German, French, Russian, Chinese, Spanish, and Korean. 「言語文化」として日本語, ドイツ語, フランス語, ロシア語, 中国語, スペイン語, 朝鮮・韓国語のうち10.5単位以上を修得すること。 2 Basic Courses in Natural Sciences (二 理系基礎科目) Must acquire at least 17.5 credits from Basic Courses in Natural Sciences, including 1.5 credits from Laboratory in Physics. 理系基礎科目は, 物理学実験1.5単位を含む17.5単位以上修得すること。

**(1) Graduation Requirements (卒業要件)**

Course Classifications 授業科目分類		Department of Physical Science and Engineering 物理工学科				
		Fundamental and Applied Physics 物理系プログラム				
		Compulsory 必修	Compulsory Elective 選必	Elective 選択	Total 合計	
Courses relating to a specialized field 工学部専門系科目	Basic Specialized Courses (専門基礎科目) Number of Credits Offered (開講単位数) Minimum Credits Required (取得要求単位数)	26 26		10 4	36 30	
	Specialized Courses (専門科目) Number of Credits Offered (開講単位数) Graduation Research (卒業研究) Minimum Credits Required (取得要求単位数)	25 10 35	14.5	10 4	49.5 10 51	
	Related Specialized Courses (関連専門科目) Number of Credits Offered (開講単位数) Minimum Credits Required (取得要求単位数)			10 4	10 4	
	Total (小計) Number of Credits Offered (開講単位数) Graduation Research (卒業研究) Minimum Credits Required (取得要求単位数)	51 10 61	14.5	30 12	95.5 10 85	
	Method of Completion (履修方法)	Compulsory 51 credits (必修 51単位) Graduation Research 10 credits (卒業研究 10単位) Elective at least 24(12) credits (選択 24(12)単位以上) * Total at least 85 credits (合計 85単位以上)				
	Liberal Arts and Sciences 全学教育科目	Basic General Education Courses (全学基礎科目) First Year Seminar (基礎セミナー) Language and Culture (言語文化) Japanese, German, French, Russian, Chinese, Spanish, Korean (日本語, ドイツ語, フランス語, ロシア語, 中国語, スペイン語, 朝鮮・韓国語)	at least 16 credits (16単位以上) at least 2 credits (2単位以上) at least 12 credits (12単位以上) at least 12 credits (12単位以上)			
		Health and Sports Sciences(健康・スポーツ科学)	at least 2 credits (2単位以上)			
		Basic Courses in Humanities and Social Sciences (文系基礎科目) Liberal Education Courses in Humanities and Social Sciences (文系教養科目)	at least 4 credits (4単位以上)			
		Basic Courses in Natural Sciences (理系基礎科目) Mathematics (数学関係) Physics (物理学関係) Chemistry (化学関係) Biology (生物学関係) Earth science (地球科学関係)	at least 23 credits (23単位以上) Must acquire a total of at least 8 credits from Calculus I, II, Linear Algebra I, II or Complex Analysis. A total of 9.5 credits from Fundamentals of Physics I, II, III, IV and Laboratory in Physics are compulsory. A total of 5.5 credits from Fundamentals of Chemistry I, II and Laboratory in Chemistry are compulsory. (微分積分学 I, II, 線形代数学 I, II, 複素関数論から計8単位以上, 物理学基礎 I, II, III, IV, 物理学実験の計9.5単位は必修。化学基礎 I, II, 化学実験の計5.5単位は必修。)			
		Liberal Education Courses in Natural Sciences (理系教養科目)	at least 4 credits (4単位以上)			
Liberal Education Courses in Interdisciplinary Fields (全学教養科目)		at least 2 credits (2単位以上)				
Method of Completion (履修方法)		Total at least 49 credits (合計 49単位以上)				
Credits required for Graduation (卒業必要単位数)		at least 134 credits (134単位以上)				

\* Must acquire at least 12 credits from Compulsory Elective.  
選択必修 12 単位を修得すること。

**(2) Advancement Requirements (進級要件)**

Assessment year 判定年次	Course Categories (科目区分)	Minimum Courses/Credits Required (最低必要科目数/単位数)	Requirements (条件等)
At the end of the 1st grade (1年終了時)	Basic Courses in Natural Sciences (理系基礎科目)	5 Subjects (5科目)	Must acquire credits for at least 5 subjects from Basic Courses in Natural Sciences. 理系基礎科目を5科目以上修得すること。
At the end of the 2nd grade (2年終了時)	Basic General Education Courses, Basic Courses in Humanities and Social Sciences, Liberal Education Courses in Humanities and Social Sciences, Basic Courses in Natural Sciences, Liberal Education Courses in Natural Sciences, Liberal Education Courses in Interdisciplinary Fields (全学基礎科目, 文系基礎科目, 文系教養科目, 理系基礎科目, 理系教養科目, 全学教養科目)	41 credits (41単位)	1 Basic General Education Courses (一 全学基礎科目) Must acquire a total of at least 10.5 "Language and Culture" credits from Japanese, German, French, Russian, Chinese, Spanish, and Korean. 「言語文化」として日本語, ドイツ語, フランス語, ロシア語, 中国語, スペイン語, 朝鮮・韓国語のうち10.5単位以上を修得すること。 2 Basic Courses in Natural Sciences (二 理系基礎科目) Must acquire at least 17.5 credits from Basic Courses in Natural Sciences, including 1.5 credits from Laboratory in Physics. 理系基礎科目は, 物理学実験1.5単位を含む17.5単位以上修得すること。

(1) Graduation Requirements (卒業要件)

Course Classifications 授業科目分類		Department of Electrical Engineerin, Electronics, and Information Engineering 電気電子情報工学科				
		Automotive Engineering 自動車工学プログラム				
		Compulsory 必修	Compulsory Elective 選必	Elective 選択	Total 合計	
Courses relating to a specialized field 工学部専門系科目	Basic Specialized Courses (専門基礎科目) Number of Credits Offered (開講単位数) Minimum Credits Required (取得要求単位数)	36.5 36.5		12 6	48.5 42.5	
	Specialized Courses (専門科目) Number of Credits Offered (開講単位数) Graduation Research (卒業研究) Minimum Credits Required (取得要求単位数)	16 10 26		32 17.5	48 10 43.5	
	Related Specialized Courses (関連専門科目) Number of Credits Offered (開講単位数) Minimum Credits Required (取得要求単位数)			14 4	14 4	
	Total (小計) Number of Credits Offered (開講単位数) Graduation Research (卒業研究) Minimum Credits Required (取得要求単位数)	52.5 10 62.5		58 27.5	110.5 10 90	
	Method of Completion (履修方法)	Compulsory 52.5 credits (必修 52.5単位) Graduation Research 10 credits (卒業研究 10単位) Elective at least 27.5 credits (選択 27.5単位以上) Total at least 90credits (合計 90単位以上)				
	Liberal Arts and Sciences 全学教育科目	Basic General Education Courses (全学基礎科目) First Year Seminar (基礎セミナー) Language and Culture (言語文化) Japanese, German, French, Russian, Chinese, Spanish, Korean (日本語, ドイツ語, フランス語, ロシア語, 中国語, スペイン語, 朝鮮・韓国語)	at least 16 credits (16単位以上) at least 2 credits (2単位以上) at least 12 credits (12単位以上) at least 12 credits (12単位以上)			
		Health and Sports Sciences(健康・スポーツ科学)	at least 2 credits (2単位以上)			
		Basic Courses in Humanities and Social Sciences (文系基礎科目) Liberal Education Courses in Humanities and Social Sciences (文系教養科目)	at least 4 credits (4単位以上)			
		Basic Courses in Natural Sciences (理系基礎科目) Mathematics (数学関係) Physics (物理学関係) Chemistry (化学関係) Biology (生物学関係) Earth science (地球科学関係)	at least 23.5 credits (23.5単位以上) A total of 10 credits from Calculus I, II, Linear Algebra I, II and Complex Analysis are compulsory. A total of 9.5 credits from Fundamentals of Physics I, II, III, IV and Laboratory in Physics are compulsory. A total of 4 credits from Fundamentals of Chemistry I, II are compulsory.  (微積分学Ⅰ,Ⅱ,線形代数学Ⅰ,Ⅱ,複素関数論の計10単位は必修。物理学基礎Ⅰ,Ⅱ,Ⅲ,Ⅳ,物理学実験の計9.5単位は必修。化学基礎Ⅰ,Ⅱの計4単位は必修。)			
		Liberal Education Courses in Natural Sciences (理系教養科目)	at least 4 credits (4単位以上)			
Liberal Education Courses in Interdisciplinary Fields (全学教養科目)		at least 2 credits (2単位以上)				
Method of Completion (履修方法)		Total at least 49.5 credits (合計 49.5単位以上)				
Credits required for Graduation (卒業必要単位数)		at least 139.5credits (139.5単位以上)				

(2) Advancement Requirements (進級要件)

Assessment year 判定年次	Course Categories (科目区分)	Minimum Courses/Credits Required (最低必要科目数/単位数)	Requirements (条件等)
At the end of the 1st grade (1年終了時)	Basic Courses in Natural Sciences (理系基礎科目)	5 Subjects (5科目)	Must acquire credits for at least 5 subjects from Basic Courses in Natural Sciences. 理系基礎科目を5科目以上修得すること。
At the end of the 2nd grade (2年終了時)	Basic General Education Courses, Basic Courses in Humanities and Social Sciences, Liberal Education Courses in Humanities and Social Sciences, Basic Courses in Natural Sciences, Liberal Education Courses in Natural Sciences, Liberal Education Courses in Interdisciplinary Fields (全学基礎科目, 文系基礎科目, 文系教養科目, 理系基礎科目, 理系教養科目, 全学教養科目)	41 credits (41単位)	1 Basic General Education Courses (一 全学基礎科目) Must acquire a total of at least 10.5 "Language and Culture" credits from Japanese, German, French, Russian, Chinese, Spanish, and Korean. 「言語文化」として日本語, ドイツ語, フランス語, ロシア語, 中国語, スペイン語, 朝鮮・韓国語のうち10.5単位以上を修得すること。 2 Basic Courses in Natural Sciences (二 理系基礎科目) Must acquire at least 17.5 credits from Basic Courses in Natural Sciences, including 1.5 credits from Laboratory in Physics. 理系基礎科目は, 物理学実験1.5単位を含む17.5単位以上修得すること。

(1) Graduation Requirements (卒業要件)

Course Classifications 授業科目分類		Department of Mechanical and Aerospace Engineering 機械・航空宇宙工学科				
		Automotive Engineering 自動車工学プログラム				
		Compulsory 必修	Compulsory Elective 選必	Elective 選択	Total 合計	
Courses relating to a specialized field 工 学 部 専 門 系 科 目	Basic Specialized Courses (専門基礎科目) Number of Credits Offered (開講単位数) Minimum Credits Required (取得要求単位数)	34.5 34.5		12 6	46.5 40.5	
	Specialized Courses (専門科目) Number of Credits Offered (開講単位数) Graduation Research (卒業研究) Minimum Credits Required (取得要求単位数)	11 10 21		38 10 22	49 10 43	
	Related Specialized Courses (関連専門科目) Number of Credits Offered (開講単位数) Minimum Credits Required (取得要求単位数)			14 5	14 5	
	Total (小計) Number of Credits Offered (開講単位数) Graduation Research (卒業研究) Minimum Credits Required (取得要求単位数)	45.5 10 55.5		64 33	109.5 10 88.5	
	Method of Completion (履修方法)	Compulsory 45.5 credits (必修 45.5単位) Graduation Research 10 credits (卒業研究 10単位) Elective at least 33 credits (選択 33単位以上) Total at least 88.5 credits (合計 88.5単位以上)				
	Liberal Arts and Sciences 全 学 教 育 科 目	Basic General Education Courses (全学基礎科目) First Year Seminar (基礎セミナー) Language and Culture (言語文化) Japanese, German, French, Russian, Chinese, Spanish, Korean (日本語, ドイツ語, フランス語, ロシア語, 中国語, スペイン語, 朝鮮・韓国語)	at least 16 credits (16単位以上) at least 2 credits (2単位以上) at least 12 credits (12単位以上) at least 12 credits (12単位以上)			
		Health and Sports Sciences(健康・スポーツ科学)	at least 2 credits (2単位以上)			
		Basic Courses in Humanities and Social Sciences (文系基礎科目) Liberal Education Courses in Humanities and Social Sciences (文系教養科目)	at least 4 credits (4単位以上)			
		Basic Courses in Natural Sciences (理系基礎科目) Mathematics (数学関係) Physics (物理学関係) Chemistry (化学関係) Biology (生物学関係) Earth science (地球科学関係)	at least 23.5 credits (23.5単位以上) A total of 10 credits from Calculus I, II, Linear Algebra I, II and Complex Analysis are compulsory. A total of 9.5 credits from Fundamentals of Physics I, II, III, IV and Laboratory in Physics are compulsory. A total of 4 credits from Fundamentals of Chemistry I, II are compulsory.  (微分積分学 I, II, 線形代数学 I, II, 複素関数論の計10単位は必修。物理学基礎 I, II, III, IV, 物理学実験の計9.5単位は必修。化学基礎 I, II の計4単位は必修。)			
		Liberal Education Courses in Natural Sciences (理系教養科目)	at least 4 credits (4単位以上)			
Liberal Education Courses in Interdisciplinary Fields (全学教養科目)		at least 2 credits (2単位以上)				
Method of Completion (履修方法)		Total at least 49.5 credits (合計 49.5単位以上)				
Credits required for Graduation (卒業必要単位数)		at least 138 credits (138単位以上)				

(2) Advancement Requirements (進級要件)

Assessment year 判定年次	Course Categories (科目区分)	Minimum Courses/Credits Required (最低必要科目数/単位数)	Requirements (条件等)
At the end of the 1st grade (1年終了時)	Basic Courses in Natural Sciences (理系基礎科目)	5 Subjects (5科目)	Must acquire credits for at least 5 subjects from Basic Courses in Natural Sciences. 理系基礎科目を5科目以上修得すること。
At the end of the 2nd grade (2年終了時)	Basic General Education Courses, Basic Courses in Humanities and Social Sciences, Liberal Education Courses in Humanities and Social Sciences, Basic Courses in Natural Sciences, Liberal Education Courses in Natural Sciences, Liberal Education Courses in Interdisciplinary Fields (全学基礎科目, 文系基礎科目, 文系教養科目, 理系基礎科目, 理系教養科目, 全学教養科目)	41 credits (41単位)	1 Basic General Education Courses (一 全学基礎科目) Must acquire a total of at least 10.5 "Language and Culture" credits from Japanese, German, French, Russian, Chinese, Spanish, and Korean. 「言語文化」として日本語, ドイツ語, フランス語, ロシア語, 中国語, スペイン語, 朝鮮・韓国語のうち10.5単位以上を修得すること。 2 Basic Courses in Natural Sciences (二 理系基礎科目) Must acquire at least 17.5 credits from Basic Courses in Natural Sciences, including 1.5 credits from Laboratory in Physics. 理系基礎科目は, 物理学実験1.5単位を含む17.5単位以上修得すること。