## Table of Curriculum (For undergraduate students admitted in 2015 or before)

Course Type	Course Code	Course NO.	Course Title	Lecture:Lab.:Credit (Homework)	Semester	Remark
Mandatory major	CH211	23.211	Physical Chemistry I	3:0:3(3)	Spring	
	CH213	23.213	Physical Chemistry II	3:0:3(3)	Fall	
	CH221	23.221	Organic Chemistry I	3:0:3(3)	Spring	
	CH223	23.223	Organic Chemistry II	3:0:3(3)	Fall	
	CH252	23.252	Chemistry Major Lab I	0:6:2(3)	Fall	
courses	CH263	23.263	Introduction to Analytical Chemistry	3:0:3(3)	Spring	
	CH344	23.344	Inorganic Chemistry I	3:0:3(3)	Spring	
	CH352	23.352	Chemistry Major Lab II	0:6:2(3)	Spring	
	CH353	23.353	Chemistry Major Lab III	0:6:2(3)	Fall	
	CH315	23.315	Physical Chemistry III	3:0:3(3)	Spring	
	CH325	23.325	Bioorganic Chemistry	3:0:3(3)	Spring	
	CH336	23.336	Physical Organic Chemistry	3:0:3(3)	Fall	
	CH345	23.345	Inorganic Chemistry II	3:0:3(3)	Fall	
	CH381	23.381	Biochemistry I	3:0:3(3)	Spring	
	CH382	23.382	Biochemistry II	3:0:3(3)	Fall	
	CH416	23.416	Introduction to Molecular Spectroscopy	3:0:3(3)	Spring or Fall	0
	CH417	23.417	Chemical Reaction Dynamics	3:0:3(3)	"	0
	CH418	23.418	Computational Chemistry	2:3:3(3)	"	0
-	CH419	23.419	Introduction to Solid-State Chemistry	3:0:3(3)	"	0
Elective	CH437	23.437	Structure Determination and Comprehension of Organic Molecules	3:0:3(3)	11	0
m a j o r course	CH438	23.438	Organic Reactions and Synthesis	3:0:3(3)	"	0
course	CH439	23.439	Introduction to Organometallic Chemistry	3:0:3(3)	"	0
	CH444	23.444	Inorganic Reactions and Spectroscopy	3:0:3(3)	Fall	
	CH450	23.450	Chemical Writing and presentation	3:0:3(3)	Spring or Fall	0
	CH451	23.451	Advanced Chemistry Lab.	0:6:2(3)	II .	
	CH452	23.452	Introduction to Nanochemistry	3:0:3(3)	"	0
	CH453	23.453	AI Chemistry	3:0:3(3)	Spring & Fall	0
	CH464	23.464	Electroanalytical Chemistry	3:0:3(3)	Fall	$\bigcirc$
	CH471	23.471	Introduction to Polymer Chemistry	3:0:3(3)	Spring or Fall	0
	CH484	23.484	Introduction to Chemical Biology	3:0:3(3)	II .	0
	CH485	23.485	Special Topics in Modern Chemistry I	3:0:3(3)	"	
	CH490	23.490	Undergraduate Research	0:6:3		
	CH491	23.491	Laboratory Rotation Program	0:3:1	Spring or Fall	
Research	CH492	23.492	Undergraduate Colloquium	1:0:1	Spring	
	CH495	23.495	Individual Study	0:6:1		

<sup>※ ⊚:</sup> Course mutually recognized by undergraduate and graduate programs

 $<sup>\</sup>times$  Course classification, course title, and mutual recognition of credits may differ according to the effective year of the requirements.

## Table of Curriculum (For undergraduate students admitted in 2016 or after)

Course Code	Course NO.	Course Title	Lecture:Lab.:Credit (Homework)	Semester	Remark
CH211	23.211	Physical Chemistry I	3:0:3(3)	Spring	
CH213	23.213	Physical Chemistry II	3:0:3(3)	Fall	
CH221	23.221	Organic Chemistry I	3:0:3(3)	Spring	
CH223	23.223	Organic Chemistry II	3:0:3(3)	Fall	
CH252	23.252	Chemistry Major Lab I	0:6:2(3)	Fall	
CH263	23.263	Introduction to Analytical Chemistry	3:0:3(3)	Spring	
CH344	23.344	Inorganic Chemistry I	3:0:3(3)	Spring	
CH352	23.352	Chemistry Major Lab II	0:6:2(3)	Spring	
CH353	23.353	Chemistry Major Lab III	0:6:2(3)	Fall	
CH315	23.315	Physical Chemistry III	3:0:3(3)	Spring	
CH325	23.325	Bioorganic Chemistry	3:0:3(3)	Spring	
CH336	23.336	Physical Organic Chemistry	3:0:3(3)	Fall	
CH382	23.382	Biochemistry II	3:0:3(3)	Fall	
CH416	23.416	Introduction to Molecular Spectroscopy	3:0:3(3)	Spring or Fall	0
CH417	23.417	Chemical Reaction Dynamics	3:0:3(3)	"	0
CH418	23.418	Computational Chemistry	2:3:3(3)	"	0
CH419	23.419	Introduction to Solid-State Chemistry	3:0:3(3)	"	0
CH437	23.437	Structure Determination and Comprehension of Organic Molecules	3:0:3(3)	"	0
CH438	23.438	Organic Reactions and Synthesis	3:0:3(3)	"	0
CH439	23.439	Introduction to Organometallic Chemistry	3:0:3(3)	"	0
CH444	23.444	Inorganic Reactions and Spectroscopy	3:0:3(3)	"	
CH450	23.450	Chemical Writing and presentation	3:0:3(3)	"	0
CH451	23.451	Advanced Chemistry Lab.	0:6:2(3)	"	
CH452	23.452	Introduction to Nanochemistry	3:0:3(3)	"	0
CH453	23.453	AI Chemistry	3:0:3(3)	"	0
CH464	23.464	Electroanalytical Chemistry	3:0:3(3)	"	0
CH471	23.471	Introduction to Polymer Chemistry	3:0:3(3)	11	0
CH484	23.484	- <u>i</u>	3:0:3(3)	"	0
CH485	23.485	Special Topics in Modern	3:0:3(3)	п	
CH345	23.345	Inorganic Chemistry II	3:0:3(3)	Fall	
CH381	23.381	Biochemistry I	3:0:3(3)	Spring	
CH490	23.490	Undergraduate Research	0:6:3		
CH491			0:3:1	Spring or Fall	
CH495	23.495	Individual Study	0:6:1	551119	
	CH211 CH213 CH221 CH223 CH252 CH263 CH344 CH352 CH353 CH315 CH325 CH336 CH382 CH416 CH417 CH418 CH419 CH437 CH438 CH439 CH444 CH450 CH451 CH452 CH453 CH464 CH450 CH451 CH452 CH453 CH464 CH471 CH484 CH485 CH345 CH485 CH345 CH345 CH345 CH345 CH484 CH485 CH485 CH345 CH490 CH491 CH492	CH211         23.211           CH213         23.213           CH221         23.221           CH252         23.252           CH263         23.263           CH344         23.344           CH352         23.352           CH353         23.353           CH315         23.315           CH325         23.325           CH336         23.336           CH382         23.382           CH416         23.416           CH417         23.417           CH418         23.418           CH419         23.419           CH437         23.439           CH438         23.439           CH444         23.444           CH450         23.450           CH451         23.451           CH452         23.452           CH453         23.453           CH464         23.464           CH471         23.471           CH484         23.484           CH485         23.485           CH345         23.345           CH486         23.485           CH381         23.381           CH490         23.490 <td>CH211 23.211 Physical Chemistry I CH213 23.213 Physical Chemistry II CH221 23.221 Organic Chemistry II CH223 23.223 Organic Chemistry II CH252 23.252 Chemistry Major Lab I CH263 23.263 Introduction to Analytical Chemistry CH344 23.344 Inorganic Chemistry II CH352 23.352 Chemistry Major Lab II CH353 23.353 Chemistry Major Lab III CH354 23.315 Physical Chemistry III CH355 23.325 Bioorganic Chemistry CH336 23.336 Physical Organic Chemistry CH336 23.336 Physical Organic Chemistry CH382 23.332 Biochemistry II CH382 23.341 Introduction to Molecular Spectroscopy CH416 23.416 Computational Chemistry CH418 23.418 Computational Chemistry CH419 23.419 Introduction to Solid-State Chemistry CH437 23.437 Comprehension of Organic Molecules CH438 23.438 Organic Reactions and Synthesis CH439 23.439 Introduction to Organometallic Chemistry CH444 23.444 Inorganic Reactions and Synthesis CH450 23.450 Chemical Writing and presentation CH451 23.451 Advanced Chemistry Lab. CH452 23.452 Introduction to Nanochemistry CH453 23.453 Al Chemistry CH464 23.464 Electroanalytical Chemistry CH464 23.464 Electroanalytical Chemistry CH471 23.471 Introduction to Polymer Chemistry CH484 23.484 Introduction to Chemical Biology CH485 23.485 Poecial Topics in Modern Chemistry I CH484 23.484 Introduction to Chemical Biology CH485 23.381 Biochemistry I CH381 23.381 Biochemistry I CH381 23.381 Biochemistry I CH490 23.490 Undergraduate Research CH491 23.491 Laboratory Rotation Program CH492 23.492 Undergraduate Colloquium</td> <td>CH211         23.211         Physical Chemistry I         3:0:3(3)           CH213         23.213         Physical Chemistry II         3:0:3(3)           CH221         23.221         Organic Chemistry II         3:0:3(3)           CH223         23.223         Organic Chemistry II         3:0:3(3)           CH252         23.252         Chemistry Major Lab I         0:6:2(3)           CH263         23.263         Chemistry Major Lab II         0:6:2(3)           CH344         23.344         Inorganic Chemistry II         3:0:3(3)           CH352         23.352         Chemistry Major Lab III         0:6:2(3)           CH353         23.355         Chemistry Major Lab III         0:6:2(3)           CH315         23.315         Physical Chemistry III         3:0:3(3)           CH325         23.335         Physical Chemistry         3:0:3(3)           CH326         23.336         Physical Chemistry         3:0:3(3)           CH327         23.325         Biochemistry II         3:0:3(3)           CH328         23.332         Biochemistry II         3:0:3(3)           CH329         23.416         Spectroscopy         3:0:3(3)           CH418         23.411         Chemistry         3:0:3(3</td> <td>CH211         23.211         Physical Chemistry I         3.0:3(3)         Spring           CH221         23.221         Physical Chemistry II         3.0:3(3)         Fall           CH221         23.221         Organic Chemistry II         3.0:3(3)         Spring           CH223         23.223         Organic Chemistry II         3.0:3(3)         Fall           CH252         23.252         Chemistry Major Lab I         0.6:2(3)         Fall           CH263         23.263         Introduction to Analytical Chemistry         3.0:3(3)         Spring           CH344         23.344         Inorganic Chemistry II         3.0:3(3)         Spring           CH352         23.352         Chemistry Major Lab III         0.6:2(3)         Spring           CH353         23.353         Chemistry Major Lab III         0.6:2(3)         Spring           CH355         23.355         Bioorganic Chemistry         3.0:3(3)         Spring           CH352         23.355         Bioorganic Chemistry         3.0:3(3)         Spring           CH352         23.355         Bioorganic Chemistry         3.0:3(3)         Spring           CH362         23.346         Chemical Trinduction         Spring of Fall           CH416</td>	CH211 23.211 Physical Chemistry I CH213 23.213 Physical Chemistry II CH221 23.221 Organic Chemistry II CH223 23.223 Organic Chemistry II CH252 23.252 Chemistry Major Lab I CH263 23.263 Introduction to Analytical Chemistry CH344 23.344 Inorganic Chemistry II CH352 23.352 Chemistry Major Lab II CH353 23.353 Chemistry Major Lab III CH354 23.315 Physical Chemistry III CH355 23.325 Bioorganic Chemistry CH336 23.336 Physical Organic Chemistry CH336 23.336 Physical Organic Chemistry CH382 23.332 Biochemistry II CH382 23.341 Introduction to Molecular Spectroscopy CH416 23.416 Computational Chemistry CH418 23.418 Computational Chemistry CH419 23.419 Introduction to Solid-State Chemistry CH437 23.437 Comprehension of Organic Molecules CH438 23.438 Organic Reactions and Synthesis CH439 23.439 Introduction to Organometallic Chemistry CH444 23.444 Inorganic Reactions and Synthesis CH450 23.450 Chemical Writing and presentation CH451 23.451 Advanced Chemistry Lab. CH452 23.452 Introduction to Nanochemistry CH453 23.453 Al Chemistry CH464 23.464 Electroanalytical Chemistry CH464 23.464 Electroanalytical Chemistry CH471 23.471 Introduction to Polymer Chemistry CH484 23.484 Introduction to Chemical Biology CH485 23.485 Poecial Topics in Modern Chemistry I CH484 23.484 Introduction to Chemical Biology CH485 23.381 Biochemistry I CH381 23.381 Biochemistry I CH381 23.381 Biochemistry I CH490 23.490 Undergraduate Research CH491 23.491 Laboratory Rotation Program CH492 23.492 Undergraduate Colloquium	CH211         23.211         Physical Chemistry I         3:0:3(3)           CH213         23.213         Physical Chemistry II         3:0:3(3)           CH221         23.221         Organic Chemistry II         3:0:3(3)           CH223         23.223         Organic Chemistry II         3:0:3(3)           CH252         23.252         Chemistry Major Lab I         0:6:2(3)           CH263         23.263         Chemistry Major Lab II         0:6:2(3)           CH344         23.344         Inorganic Chemistry II         3:0:3(3)           CH352         23.352         Chemistry Major Lab III         0:6:2(3)           CH353         23.355         Chemistry Major Lab III         0:6:2(3)           CH315         23.315         Physical Chemistry III         3:0:3(3)           CH325         23.335         Physical Chemistry         3:0:3(3)           CH326         23.336         Physical Chemistry         3:0:3(3)           CH327         23.325         Biochemistry II         3:0:3(3)           CH328         23.332         Biochemistry II         3:0:3(3)           CH329         23.416         Spectroscopy         3:0:3(3)           CH418         23.411         Chemistry         3:0:3(3	CH211         23.211         Physical Chemistry I         3.0:3(3)         Spring           CH221         23.221         Physical Chemistry II         3.0:3(3)         Fall           CH221         23.221         Organic Chemistry II         3.0:3(3)         Spring           CH223         23.223         Organic Chemistry II         3.0:3(3)         Fall           CH252         23.252         Chemistry Major Lab I         0.6:2(3)         Fall           CH263         23.263         Introduction to Analytical Chemistry         3.0:3(3)         Spring           CH344         23.344         Inorganic Chemistry II         3.0:3(3)         Spring           CH352         23.352         Chemistry Major Lab III         0.6:2(3)         Spring           CH353         23.353         Chemistry Major Lab III         0.6:2(3)         Spring           CH355         23.355         Bioorganic Chemistry         3.0:3(3)         Spring           CH352         23.355         Bioorganic Chemistry         3.0:3(3)         Spring           CH352         23.355         Bioorganic Chemistry         3.0:3(3)         Spring           CH362         23.346         Chemical Trinduction         Spring of Fall           CH416

<sup>※ ⊚:</sup> Course mutually recognized by undergraduate and graduate programs

<sup>\*</sup> Course classification, course title, and mutual recognition of credits may differ according to the effective year of the requirements.

## Table of Curriculum (Graduate Program)

Course Type	Course Code	Course NO.	Course Title	Lecture:Lab.:Credit (Homework)	Semester	Remark
	CH502	23.502	Quantum Chemistry I	3:0:3(3)	Spring or Fall	0
	CH503	23.503	Statistical Thermodynamics I	3:0:3(3)	"	0
	CH504	23.504	Advanced Physical Chemistry	3:0:3(3)	"	
	CH521	23.521	Advanced Organic Chemistry	3:0:3(3)	"	
	CH522	23.522	Organic Synthesis I	3:0:3(3)	"	0
	CH523	23.523	Organic Synthesis II	3:0:3(3)	11	
	CH541	23.541	Advanced Inorganic Chemistry	3:0:3(3)	"	0
	CH542	23.542	Organometallic Chemistry	3:0:3(3)	"	0
	CH581	23.581	Advanced Biochemistry	3:0:3(3)	"	
	CH582	23.582	Protein Chemistry	3:0;3(3)	"	0
	CH604	23.604	Quantum Chemistry II	3:0:3(3)	"	
	CH605	23.605	Statistical Thermodynamics II	3:0:3(3)	"	
	CH606	23.606	Chemical Reaction Dynamics	3:0:3(3)	"	
	CH607	23.607	Surface Chemistry	3:0:3(3)	"	
	CH609	23.609	Electrochemistry	3:0:3(3)	"	
	CH610	23.610	Structural Biochemistry	3:0:3(3)	"	
	CH626	23.626	Natural Products	3:0:3(3)	"	
	CH627	23.627	Heterocyclic Chemistry	3:0:3(3)	"	
	CH628	23.628	Organometallic Reactions	3:0:3(3)	"	
Elective	CH632	23.632	Stereochemistry of Organic Chemistry	3:0:3(3)	ıı	
	CH644	23.644	Bioinorganic Chemistry	3:0:3(3)	"	
	CH645	23.645	Catalysis Chemistry	3:0:3(3)	"	
	CH646	23.646	Materials Chemistry	3:0:3(3)	"	
	CH661	23.661	Electrocatalysis	3:0:3(3)	11	
	CH671	23.671	Chemistry of Organic High Polymers	3:0:3(3)	11	
	CH672	23.672	Specialty Polymer Chemistry	3:0:3(3)	"	
	CH673	23.673	Polymer Physical Chemistry	3:0:3(3)	"	
	CH674	23.674	Organic Electronic Materials	3:0:3(3)	"	
	CH675	23.675	Introduction to Lithography	3:0:3(3)	"	
	CH683	23.683	Cell Biochemistry	3:0:3(3)	"	
	CH711	23.711	Special Topics in Physical Chemistry I	3:0:3(3)	11	
	CH712	23.712	Special Topics in Physical Chemistry II	3:0:3(3)	ıı .	
	CH713	23.713	Special Topics in Physical Chemistry III	3.0.3(3)	II	
	CH733	23.733	Special Topics in Organic Chemistry	3:0:3(3)	"	
	CH734	23.734	Special Topics in Organic Chemistry	3:0:3(3)	"	
	CH735	23.735	Special Topics in Organic Chemistry	3:0:3(3)	II	

Course Type	Course Code	Course NO.	Course Title	Lecture:Lab.:Credit (Homework)	Semester	Remark
	CH746	23.746	Special Topics in Inorganic Chemistry I	3:0:3(3)	"	
	CH747	23.747	Special Topics in Inorganic Chemistry II	3:0:3(3)	"	
	CH773	23.773	Special Topics in Polymer Chemistry	3:0:3(3)	"	
	CH774	23.774	Special Topics in Polymer Chemistry	3:0:3(3)	"	
	CH782	23.782	Special Topics in Biochemistry I	3:0:3(3)	"	
	CH783	23.783	Special Topics in Biochemistry II	3:0:3(3)	"	
	CH881	23.881	Advanced Special Topic in Chemistry I	1:0:1(0)	Summer	
	CH882	23.882	Advanced Special Topic in Chemistry II	2:0:2(0)	Summer	
	CH960	23.960	Thesis / Dissertation Research (Master)			
Research	CH966	23.966	Seminar (Master)	1:0:1		
	CH980	23.980	Thesis / Dissertation Research (Doctoral)			
	CH986	23.986	Seminar (Doctoral)	1:0:1		
	CH990	23.990	Chemistry Education Training	0:3:1		

<sup>※ ⊚:</sup> Course mutually recognized by undergraduate and graduate programs

<sup>\*\*</sup> Course classification, course title, and mutual recognition of credits may differ according to the effective year of the requirements.

## Substitute Course List

Substitute courses in the department								
Category -	Cours	es Currently offered	Courses not currently offered					
	Course No.	Course Title	Course No.	Course Title	Remark			
Under- graduate	CH344	Inorganic Chemistry I	CH241	Inorganic Chemistry I	Change in Course Code			
Under- graduate	CH345	Inorganic Chemistry II	CH242	Inorganic Chemistry II	Change in Course Code			
Under- graduate	CH444	Inorganic Reactions and Spectroscopy	CH444	Inorganic Materials Chemistry	Change in Course Title			
Under- graduate	CH263	Introduction to Analytical Chemistry	CH361	Introduction to Analytical Chemistry	Change in Course Code			
Under- graduate	CH263	Introduction to Analytical Chemistry	CH261	Analytical Chemistry	Course Closed			
Under- graduate	CH263	Introduction to Analytical Chemistry	CH463	Instrumental Analysis	Course Closed			
Under- graduate	CH252	Chemistry Major Lab I	CH252	Chemistry Lab I	Change in Course Title			
Under- graduate	CH252	Chemistry Major Lab I	CH351	Chemistry Lab II	Course Closed			
Under- graduate	CH352	Chemistry Major Lab II	CH251	Chemistry Lab I	Course Closed			
Under- graduate	CH352	Chemistry Major Lab II	CH352	Chemistry Lab II	Change in Course Title			
Under- graduate	CH361	Introduction to Analytical Chemistry	CH463	Instrumental Analysis	Course Closed			
Under- graduate	CH382	Biochemistry II	CH482	Biochemistry II	Change in Course Code			
Under- graduate	CH241	Inorganic Chemistry I	CH342	Inorganic Chemistry II	Change in Course Code			
Under- graduate	CH242	Inorganic Chemistry II	CH342	Inorganic Chemistry II	Change in Course Code			
Under- graduate	CH416	Introduction to Molecular Spectroscopy	CH316	Molecular Spectroscopy	Course Closed			

 $<sup>\</sup>times$  Course classification, course title, and mutual recognition of credits may differ according to the effective year of the requirements.