

# CHEMISTRY EDUCATION (CHED) – Program for Students who Started Department in 2018

## FIRST YEAR

### First Semester

CHEM 105	General Chemistry I	(4-4)6
MATH 117	Calculus I	(4-2)5
PHYS 111	Physics I (Mechanics)	(4-2)5
ENG 101	English for Academic Purposes I	(4-0)4
EDS 115	Introduction to Education	(2-0)2
EDS 240	Educational Sociology	(2-0)2
HIST 2201	Principles of Kemal Atatürk I	NC
CEIT 105	Information Technology in Education	(3-0)3
OHS 101	Occupational Health and Safety	NC

### Second Semester

CHEM 106	General Chemistry II	(4-4)6
MATH 118	Calculus II	(4-2)5
PHYS 112	Physics II (Electrics and Mag)	(4-2)5
ENG 102	English for Academic Purposes II	(4-0)4
EDS 125	Educational Psychology	(2-0)2
EDS 255	Educational Philosophy	(2-0)2
HIST 2202	Principles of Kemal Atatürk II	NC
BIO 106	General Biology	(3-0)3

## SECOND YEAR

### Third Semester

CHEM 221	Analytical Chemistry I	(4-0)4
CHEM 223	Analytical Chemistry Lab I	(0-6)3
CHEM 233	Introduction to Organic Chemistry	(2-0)2
EDS 266	Instructional Technologies	(2-0)2
EDS 212	Instructional Principles and Methods	(2-0)2
MSE 218	Learning and Teaching Approaches in Chemistry	(2-0)2
Free Elective*	CHEM 257 Mathematics for Chemists	(4-0)4
	Educational Elective	
	Elective	
	Elective	

### Fourth Semester

CHEM 234	Organic Chemistry I	(4-0)4
CHEM 236	Organic chemistry Lab I	(0-4)2
CHEM 252	Physical Chemistry I	(4-0)4
EDS 213	History of Turkish Education	(2-0)2
EDS 214	Research Methods in Education	(2-0)2
MSE 220	Chemistry Curriculum	(2-0)2
Free Elective*	ENG 211 Academic Oral Presentation Skills	(3-0)3
Elective**	CHEM 254 Physical Chemistry Laboratory I	(0-4)2
	Educational Elective	
	Free elective	

## THIRD YEAR

### Fifth Semester

CHEM 301	Organic Chemistry II	(4-0)4
CHEM 361	Inorganic Chemistry I	(4-0)4
TURK 305	Oral Communication	(2-0)2
	Elective	
	Departmental elective I	

### Sixth Semester

CHEM 322	Analytical Chemistry II	(4-0)4
CHEM 324	Analytical Chemistry Lab II	(0-6)3
CHEM 353	Physical Chemistry II	(4-0)4
MSE 305	Assessment of Learning in Science and Mathematics	(3-0)3
MSE 310	Methods of Secondary Science Teaching I	(2-2)3
ENG 311	Advanced Communication Skills	(3-0)3
TURK 306	Written Expression	(2-0)2

## FOURTH YEAR

### Seventh Semester

MSE 411	Methods of Secondary Science Teaching II	(2-2)3
MSE 417	School Experience	
MSE 405	Laboratory Applications in Secondary Science Education I	(1-4)3
EDS 304	Classroom Management	(2-2)3
	Elective	(2-2)3

### Eighth Semester

MSE 418	Practice Teaching	(2-6)5
EDS 424	Guidance	(3-0)3
MSE 429	Chemistry in Daily Life	(3-0)3
	Restricted Elective	
	Departmental Elective II	

All electives must be at least 3 METU credits and 5 ECTS credits each.

Restricted Elective: CHEM 362 Inorganic Chemistry II or CHEM 350 Quantum Chemistry

Departmental Elective: Courses offered by Department of Mathematics and Science Education (either with MSE or SSME codes)

\* 30 Temmuz 2019 tarihli Üniversite Senato Kararı'na (Toplantı No: 2019/7; Karar No:1) göre Free Elective kategorisindeki derslerden biri 2340257 Mathematics for Chemists ve diğeri 6390211 Academic Oral Presentation Skills dersi olmalıdır. Ayrıca Elective kategorisindeki derslerden biri 2340254 Physical Chemistry Laboratory I dersi olmalıdır.