

## CHEMISTRY EDUCATION (CHED) – Program for Students who Started Department in 2020

### FIRST YEAR

#### First Semester

CHEM 105	General Chemistry I	(4-0)4
CHEM 115	General Chemistry Lab I	(0-4)2
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

#### Second Semester

CHEM 106	General Chemistry II	(4-0)4
CHEM 116	General Chemistry Laboratory II	(0-4)2
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
IS 100	Introduction to Information Technologies and Applications	NC

### 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
CHEM 257	Mathematics for Chemists	(4-0)4
EDS 200	Introduction to Education	(3-0)3
HIST 2201	Principles of Kemal Atatürk I	NC

#### 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
CHEM 254	Physical Chemistry Lab I	(0-4)2
MSE 210	Theories of Teaching and Learning in Science and Mathematics	(3-0)3
ENG 211	Academic Oral Presentation Skills	(3-0)3
HIST 2202	Principles of Kemal Atatürk II	NC

### THIRD YEAR

#### Fifth Semester

CHEM 301	Organic Chemistry II	(4-0)4
CHEM 361	Inorganic Chemistry I	(4-0)4
MSE 326	Curriculum Dev. and Instruction in Science and Mathematics Education	(3-0)3
TURK 305	Oral Communication	(2-0)2
	Elective I	
	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 329	Instructional Technology and Material Development	(2-2)3
MSE 417	School Experience	(1-4)3
MSE 405	Laboratory Applications in Secondary Science Education I	(2-2)3
EDS 304	Classroom Management	(2-2)3
	Elective II	

#### 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)