

# ELEMENTARY SCIENCE EDUCATION (ESE) – Program for Students who Started Department in 2019

## FIRST YEAR

### First Semester

PHYS 181	Basic Physics I	(4-2)5
MATH 117	Calculus I	(4-2)5
CHEM 111	General Chemistry I	(3-2)4
EDS 115	Introduction to Education	(2-0)2
ENG 101	English for Academic Purposes I	(4-1)4
EDS 255	Educational Philosophy	(2-0)2
HIST 2201	Principles of Kemal Atatürk I	NC
CEIT 105	Information Technology in Education	(3-0)3

### Second Semester

PHYS 182	Basic Physics II	(4-2)5
MATH 118	Calculus II	(4-2)5
CHEM 112	General Chemistry II	(3-2)4
ENG 102	English for Academic Purposes II	(4-1)4
EDS 125	Educational Psychology	(2-0)2
BIO 140	Biology I	(2-2)3
EDS 240	Educational Sociology	(2-0)2
HIST 2202	Principles of Kemal Atatürk II	NC

## SECOND YEAR

### Third Semester

PHYS 283	Optics and Modern Physics	(4-0)4
GEO 0231	Elements of Geology	(3-0)3
BIO 241	Biology II	(2-2)3
ENG 211	Academic Oral Presentation Skills	(3-1)3
MSE 221	Instructional Principles and Methods	(2-2)3

### Fourth Semester

CHEM 282	Fundamentals of Organic Chemistry	(3-0)3
BIO 242	Biology III	(2-2)3
MSE 288	Community Service	(1-4)3
MSE 349	History and Nature of Science	(3-0)3
	Elective I	

## THIRD YEAR

### Fifth Semester

MSE 431	Research Methods in Education	(3-0)3
MSE 301	Methods of Science Teaching in Middle Schools I	(2-2)3
TURK 305	Oral Communication	(3-0)2
MSE 329	Instructional Technology and Material Development	(2-2)3
MSE 309	Statistical Applications in Education	(2-2)3
TURK 311	Advanced Communication Skills	(3-1)3
	Departmental Elective I	

### Sixth Semester

MSE 305	Assessment of Learning in Science and Mathematics	(3-0)3
MSE 302	Methods of Science Teaching in Middle Schools II	(2-2)3
TURK 306	Written Communication	(2-0)2
EDS 304	Classroom Management	(3-0)3
ASTR 200	Introductory Astronomy	(3-0)3
MSE 303	Laboratory Applications in Science Teaching I	(2-2)3

## FOURTH YEAR

### Seventh Semester

MSE 487	Environmental Science	(2-2)3
MSE 417	School Experience	(1-4)3
MSE 401	Interdisciplinary Science Teaching	(2-2)3
	Departmental Elective II	
	Elective II	

### Eighth Semester

MSE 418	Practice Teaching	(2-6)5
EDS 416	Turkish Educational System and School Management	(3-0)3
EDS 424	Guidance	(3-0)3
	Departmental Elective III	
	Elective III	

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

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