Course Syllabus

Code - Course Title	**ECZ256 - Introduction to Pharmaceutical and Medicinal Chemistry**
Course Type	IV. SEMESTER
Laboratory + Practice	4+1
ECTS	**5.0**
Language of Instruction	Türkçe
Course Type	Required Courses
Course Instructor(s)	PROF. DR. AHMET ÇAĞRI KARABURUN, PROF. DR. ULVİYE ACAR ÇEVİK

Mode of Delivery	The mode of delivery of this course is Face to face
Prerequisites	There is no prerequisite or co-requisite for this course.
Courses Recomended	There is no recommended optional programme component for this course.
Work Placement	Not Applicable

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Introduction to Pharmaceutical Chemistry; General Laboratory Rules and Introduction to Laboratory Materials	
Week - 2		Classification of Drugs According to Their Thermodynamic Activities; Application of Synthesis and Separation and Purification (Demostrative)	
Week - 3		Drug-Receptor Interactions; Synthesis and Separation Purification Application	
Week - 4		Drug-Receptor Interactions Yield Calculation of Synthesized Compounds, Spectroscopic Analysis Evaluation and Reporting	
Week - 5		Structure-Effect Relationships; Qualitative Analysis and Functional Group Analysis (Demostrative)	
Week - 6		Structure-Effect Relationships; Qualitative Analysis Application (Demostrative)	
Week - 7		Structure-Effect Relationships; Qualitative Analysis Application I	
Week - 8		Structure-Effect Relationships: Qualitative Analysis Application II	
Week - 9		Drug Structure and Metabolism; Quantitative Analysis Types (Demostrative)	
Week - 10		Drug Structure and Metabolism; Solution Preparation and Quantitative Analysis Application (Demostrative)	
Week - 11		Drug Structure and Metabolism; Application of Quantitative Analysis I	
Week - 12		Drug Design and New Drug Development; Application of Quantitative Analysis II	
Week - 13		Drug Design and New Drug Development; General Evaluation and Compensation Laboratory	

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 14		Drug Design and New Drug Development; General Evaluation and Compensation Laboratory	

Learning Outcomes

#	Learning Outcome
1	Explain the definition and historical development of pharmaceutical chemistry.
2	Explain structure-nonspecific drugs.
3	Explain structure-specific drugs.
4	Explain chemical bonds in drug-receptor interactions.
5	Explain drug-receptor compatibility and stereochemical factors.
6	Explain the physicochemical properties and pharmacological activity.
7	Explains the pKa value and the factors affecting pKa.
8	Explain structural features and pharmacological activity.
9	Explain Quantitative Structure-Activity Relationships (QSAR).
10	Explain Phase I Reactions.
11	Explain Phase II Reactions.
12	Explain the effects of stereochemical factors on metabolism.
13	Explain drug metabolism studies.
14	Explain drug development methods.
15	Explain Combinatorial Chemistry.
16	Be able to perform synthesis applications.
17	Be able to perform separation and purification applications.
18	Be able to perform IR Spectroscopy applications.
19	Be able to perform 1H NMR Spectroscopy applications.
20	Be able to perform mass spectroscopy applications.
21	Be able to determine physical properties.
22	Be able to determine chemical properties.
23	Be able to perform functional group analyses.
24	Be Able to Perform Special Diagnostic Reactions.
25	Be able to perform titration methods.
26	Be able to perform Instrumental Analysis Application.

Sustainable Development Goals

No content has been provided.

Course Theme

No content has been provided.

AKTS Workload

Activity	Duration (Hour)	Count	Workload
Teorik Derse Katılım	0	0	0
Sınıf Dışı Çalışma (Ön Hazırlık & Pekiştirme Amaçlı)	0	0	0
Ödevler	0	0	0
Proje - Rapor - Sunum Hazırlama	0	0	0
Ara Sınav Hazırlığı (sınav süresi dahil)	0	0	0
Final Sınavı Hazırlığı (sınav süresi dahil)	0	0	0
Uygulama (Laboratuvar, Müzik/Enstrüman Uygulaması, Atölye/Saha Çalışması vb.)	0	0	0
Staj Uygulaması	0	0	0
		Calculated ECTS	**0**

Assessment Method and Passing Requirements

No content has been provided.