Course Syllabus

Code - Course Title	**KİM678 - Quality by Design in Analytical Chemistry**
Course Type	II. SEMESTER
Laboratory + Practice	3+0
ECTS	**7.5**
Language of Instruction	Türkçe
Course Type	Elective Courses
Course Instructor(s)	DOÇ. DR. SANİYE ÖZCAN

Mode of Delivery	Face to face
Prerequisites	There is not any prerequisites and co-requisites.
Courses Recomended	None
Recommended Resources	• Beg, S., Hasnain, M. S., Rahman, M., & Almalki, W. H. (Eds.). (2021). Handbook of Analytical Quality by Design. Academic Press.• Orlandini, S., Pinzauti, S., & Furlanetto, S. (2013). Application of quality by design to the development of analytical separation methods. Analytical and bioanalytical chemistry, 405, 443-450.• Rathore, A. S., & Winkle, H. (2009). Quality by design for biopharmaceuticals. Nature biotechnology, 27(1), 26-34.
Work Placement	None

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Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Introduction to Analytical Quality by Design	
Week - 2		International Regulations	
Week - 3		Analytical Quality by Design for Spectrophotometric Method Development	
Week - 4		Analytical Quality by Design for Gas Chromatographic Method Development	
Week - 5		Analytical Quality by Design for Liquid Chromatographic Method Development	
Week - 6		Analytical Quality by Design for Liquid Chromatographic Method Development	
Week - 7		Analytical Quality by Design for Liquid Chromatographic Method Development	
Week - 8		Analytical Quality by Design for High-Performance Thin-Layer Chromatography Method Development	
Week - 9		Analytical Quality by Design in CE Method Development	
Week - 10		Quality by Design-Based Development of Vibrational Spectroscopy Methods	
Week - 11		Risk Assessment and Design Space Consideration in Analytical Quality by Design	
Week - 12		Risk Assessment and Design Space Consideration in Analytical Quality by Design	

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Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 13		Design of Experiments Application for Analytical Method Development	
Week - 14		Quality by Design; Design of Experiments Application for Analytical Method Development	

Learning Outcomes

#	Learning Outcome
1	To explain the quality approach by design.
2	Explaining the point of view of the authority guides on the quality by design approach.
3	Applying the quality-by-design approach to analytical techniques.
4	Makes risk and area assessment in a created design.

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.