

Dersin Tanımı					
Adı	Kodu	Yarıyıl	T+U Saat	Kredi	AKTS
BİYOENFORMATİKTE SEÇME KONULAR	MMBY1211561	Bahar Dönemi	2+2	3	7
<b>Ön Koşul Dersleri</b>					
<b>Önerilen Seçmeli Dersler</b>					
<b>Dersin Dili</b>	İngilizce				
<b>Dersin Seviyesi</b>	Yüksek Lisans				
<b>Dersin Türü</b>	Programa Bağlı Seçmeli				
<b>Dersin Koordinatörü</b>	Dr.Öğr.Üye. Kıvanç KÖK				
<b>Dersi Verenler</b>	Dr.Öğr.Üye. Kıvanç KÖK				
<b>Dersin Yardımcıları</b>					
<b>Dersin Amacı</b>	This course provides graduate level knowledge of bioinformatics by evaluation of selected topics in the field.				
<b>Dersin İçeriği</b>	Bu ders; Introduction to fundamental bioinformatics, Introduction to Linux, Primary bioinformatics data formats and databases, Scientific programming and bioinformatics workflows, Statistical İnference and data mining in bioinformatics, Sequence alignments and motif search methods, Phylogenetic tree construction and comparative genomics, Structural bioinformatics of proteins, Genome data analysis, Transcriptome data analysis, Proteome data analysis, Microbiome data analysis, Network analysis and Systems Biology, Lastest advancements and emerging topics in bioinformatics; konularını içermektedir.				
<b>Dersin Öğrenme Kazanımları</b>				<b>Öğretim Yöntemleri</b>	<b>Ölçme Yöntemleri</b>
Students will gain knowledge about main concepts and key methods in bioinformatics.				16, 37, 6	A, E, G
Students will be able to retrieve, organize and manage biological data. Students will learn to recognize computational challenges and describe bioinformatics problems. Students will be able to comprehend related methodology and apply proper bioinformatics solutions.				3, 37, 5, 6	A, E, G
Students will be able to evaluate and interpret the data analysis result. Students will learn to use appropriate terminology and report bioinformatics findings.				10, 12, 16, 37, 6	A, E, G
Students will obtain novel insights into interdisciplinary and integrative research strategies.				10, 16, 37, 6	A, E, G
Students will be able to discuss recent developments and emerging topics in bioinformatics. Students being able to follow state-of-the-art research in this interdisciplinary field.				10, 13, 14, 16, 6	A, E, G
<b>Öğretim Yöntemleri</b>	10: Tartışma Yöntemi, 12: Problem Çözme Yöntemi, 13: Örnek Olay Yöntemi, 14: Bireysel Çalışma Yöntemi, 16: Soru - Cevap Tekniği , 3: Probleme Dayalı Öğrenme Modeli, 37: Bilgisayar Ve İnternet Destekli Öğretim, 5: İşbirlikli Öğrenme Modeli, 6: Deneyimle Öğrenme Modeli				
<b>Ölçme Yöntemleri</b>	A: Klasik Yazılı Sınav, E: Ödev, G: Kısa Sınav				
<b>Ders Akışı</b>					
<b>Sıra</b>	<b>Konular</b>	<b>Ön Hazırlık</b>			
1	Introduction to fundamental bioinformatics				
2	Introduction to Linux				
3	Primary bioinformatics data formats and databases				
4	Scientific programming and bioinformatics workflows				
5	Statistical İnference and data mining in bioinformatics				
6	Sequence alignments and motif search methods				
7	Phylogenetic tree construction and comparative genomics				
8	Structural bioinformatics of proteins				
9	Genome data analysis				
10	Transcriptome data analysis				
11	Proteome data analysis				
12	Microbiome data analysis				
13	Network analysis and Systems Biology				
14	Lastest advancements and emerging topics in bioinformatics				
<b>Değerlendirme Yöntemleri</b>			<b>Sınava Katkısı</b>		
Ara Sınav			50		
Genel Sınav			50		

Kaynaklar	
Understanding bioinformatics. Published in 2008. Marketa Zvelebil & Jeremy O. Baum. ISBN-10: 0-8153-4024-9 (pbk.). Garland Science, Taylor & Francis Group, LLC.	