

# DERS TANITIM ve UYGULAMA BİLGİLERİ

Dersin Adı	Kodu	Yarıyıl	T+U+L (saat/hafta)	Türü (Z / S)	Yerel Kredi	AKTS
Modern Biyolojiye Giriş	BIO 105	Bahar	04+00+00	Zorunlu	4	6
Akademik Birim:	Biyoinformatik ve Genetik					
Öğrenim Türü:	Örgün Eğitim					
Ön Koşullar	Yok					
Öğrenim Dili:	İngilizce					
Dersin Düzeyi:	Lisans					
Dersin Koordinatörü:	Ebru BİLGET GÜVEN					
Dersin Amacı:	<p>To teach the basic concepts of biology, asking scientific questions, the scientific method, the general experimental design and scientific reporting.</p> <p>To make the students perceive life, fundamental features of organisms and basic biological mechanisms.</p> <p>To teach the basic molecular aspects of biology, which are critical to understand cell biology, bioinformatics and genetics.</p> <p>To make students understand how populations evolve and why evolution is the core theme of biology.</p>					
Dersin İçeriği:	<p>A general introduction to biology, biological experimenting, reporting, molecules of life, organization of the cell, cell membrane, enzymes, ATP production, chromosomes and cell division, genetics, molecular genetics, recombinant DNA technology, genetic diseases, biotechnology and evolution.</p>					
Dersin Öğrenme Çıktıları (ÖÇ):	<ul style="list-style-type: none"><li>• <b>1-</b> Describe common properties shared by all forms of life.</li><li>• <b>2-</b> Explain why evolution is the core theme of biology.</li><li>• <b>3-</b> Introduce the macromolecules building up cells and understand the biological organization of a cell.</li><li>• <b>4-</b> Understand the perpetuation of life: cell division and reproduction.</li><li>• <b>5-</b> Describe the patterns of inheritance.</li><li>• <b>6-</b> Explain how DNA serves as the basis of heredity, how it replicates, and how it controls the cell.</li><li>• <b>7-</b> The Chromosomal Basis of Inheritance, Sex Chromosomes, and Sex-Linked Genes</li><li>• <b>8-</b> Methods and applications of gene cloning, DNA profiling, genetically modified organisms and genomics.</li><li>• <b>9-</b> Understand how populations evolve.</li><li>• <b>10-</b> Understand the primate diversity and hominin evolution.</li></ul>					
Dersin Öğrenme Yöntem ve Teknikleri	<p>PowerPoint presentations including important images and daily examples about the subject, which are also shared with the students through the BlackBoard platform. Explaining the concepts on the board. (students are allowed to take photos). Conversation with the students during the lecture. Watching mechanistic/explanatory videos during lectures and discussing with students. Suggesting videos to watch later.</p>					

## HAFTALIK PROGRAM

Hafta	Konular	Ön Hazırlık	ÖÇ
1	Chapter 1: Biology: Exploring Life	Presentation	1, 2
2	Chapter 3: The Molecules of Cells	Presentation	3
3	Chapter 4: A Tour of the Cell	Presentation	3
4	Chapter 8: The Cellular Basis of Reproduction and Inheritance	Movie (GATTACA), Presentation	4
5	Chapter 9: Patterns of Inheritance	Presentation	4, 5
6	Chapter 9: Patterns of Inheritance	Assignment #1, Presentation	5, 6

7	Chapter 9: Patterns of Inheritance	Presentation	5, 7
8	Chapter 12: DNA Technology and Genomics	Midterm, Presentation	8
9	Chapter 12: DNA Technology and Genomics	Movie (WCKN), Presentation	8
10	Chapter 12: DNA Technology and Genomics	Assignment #2, Presentation	8
11	Chapter 13: How Populations	Movie (YIA), Presentation	9
12	Chapter 13: How Populations	Movie (YIA), Presentation	9, 10
13	Chapter 19: Primate Diversity and Hominin Evolution	Movie (YIA), Presentation	9, 10
14	Chapter 19: Primate Diversity and Hominin Evolution	Assignment #3, Movie (Ape to Man), Presentation	9, 10

Kadir Has Üniversitesi'nde bir dönem 14 haftadır, 15. ve 16. hafta sınav haftalarıdır.

## ZORUNLU ve ÖNERİLEN OKUMALAR

Required Textbook  
Year/Edition: International Edition (7th Edition)  
Title: Campbell Biology: Concepts and Connections Author(s): Campbell, Reece, Taylor, Simon, Dickey Publisher: Pearson

## DİĞER KAYNAKLAR

Movie (GATTACA).  
Movie (What Darwin Never Knew / WCKN).  
Movie (Ape To Man)  
Movie (Your Inner Animals / YIA)

## DEĞERLENDİRME SİSTEMİ

Yarıyıl İçi Çalışmaları	Sayı	Katkı Payı (%)
Katılım	14	-
Ödev	3	30
Ara Sınavlar/Sözlü Sınavlar/Kısa Sınavlar	1	30
Final Sınavı	1	40
<b>Total:</b>	<b>19</b>	<b>100</b>

## İŞ YÜKÜ HESAPLAMASI

Etkinlikler	Sayısı	Süresi (saat)	Toplam İş Yüğü (saat)
Ders Saati	14	4	56

Ödev	3	15	45
Ara Sınavlar/Sözlü Sınavlar/Kısa Sınavlar	1	20	20
Final Sınavı	1	30	30
<b>Toplam İş Yüğü (saat):</b>			<b>151</b>

1 AKTS = 25 saatlik iş yüğü

## PROGRAM YETERLİLİKLERİ (PY) ve ÖĞRENME ÇIKTILARI (ÖÇ) İLİŞKİSİ

#	PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9	PY10	PY11	PY12
OC1	3											1
OC2	3											1
OC3	3											1
OC4	3											1
OC5	3											1
OC6	3											1
OC7	3											1
OC8	3											1
OC9	3											1
OC10	3											1

**Katkı Düzeyi:** 1 Düşük, 2 Orta, 3 Yüksek