

교과목명	유전학1	학수번호	10868001	이수	전선	학점	3
강의시간	월A, 화E	강의실	바이오나노대학-306				
선수과목			공학인증 이수구분				
교수소속	바이오나노대학 생명과학과	교수성명	남명진	연락처			
e-mail		연구실		지도상담시간			
홈페이지/카페			조교				

강의 개요

Attendance at the discussion sections is highly recommended. These discussions will be used to cover additional concepts, and reinforce concepts with exercises as well as to review any confusing material from lecture and to help students with example problems.

강의 목표

- Understand laws of heredity that govern reproduction of nuclear, organellar, and prokaryotic genomes
- Understand the genetics of complex traits
- Recognize that the structure and function of DNA are intertwined, and understand how DNA is compacted in cells and its implications for transcription
- Understand the process of DNA replication, how it can lead to mutations, and the impact of mutations on gene function
- Understand how transcription and translation are regulated in prokaryotes and eukaryotes, and recognize the implications of gene regulation on diverse biological processes such as development and cancer
- Understand how geneticists manipulate genes and DNA to determine their properties and uncover their functions in the laboratory and using model organisms
- Utilize knowledge of genetics and experimental techniques to generate hypotheses, interpret experimental data, and design new experiments

강의 진행방법

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평가요소	성적 평가방법	비율
출석		0
중간고사		40
기말고사		40
레포트		20
그룹 프로젝트		0
기타		0
합 계		100

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과제명 및 과제작성 방법안내	제출일	제출물 유형 및 제출방법

* 과제지연시 패널티 기준 :

구분	교재명	저자	출판사	출판년도
주교재	Concepts of Genetics	William S. Klug	Pearson Education	2011
부교재				
참고자료				

강의 규정 (학습자 유의사항)

It is important to read the text and attend lecture. Many questions from the text will be assigned as study aids.

장애학생 지원내용

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주차	기간	수업내용 및 학습활동						
1	08/31 ~ 09/06	Genetic Code and Transcription						
2	09/07 ~ 09/13	Translation and Proteins						
3	09/14 ~ 09/20	Gene Mutation, DNA Repair, and Transposition						
4	09/21 ~ 09/27	Gene Mutation, DNA Repair, and Transposition						
5	09/28 ~ 10/04	Gene regulation in Prokaryotes						
6	10/05 ~ 10/11	Gene regulation in Eukaryotes						
7	10/12 ~ 10/18	Gene regulation in Eukaryotes						
8	10/19 ~ 10/25	Exam I						
9	10/26 ~ 11/01	Developmental Genetics						
10	11/02 ~ 11/08	Cancer and Regulation of the Cell Cycle						
11	11/09 ~ 11/15	Recombinant DNA Technology						
12	11/16 ~ 11/22	Genomics, Bioinformatics, and Proteomics						
13	11/23 ~ 11/29	Applications and Ethics of Genetic Engineering						
14	11/30 ~ 12/06	Human Identity Testing						
15	12/07 ~ 12/13	Student Presentation						
16	12/14 ~ 12/20	Exam II						