

MICR302
Molecular Microbiology
CRN 22200
Winter / Spring 2019

Class time/location: Mon, Thurs, 11:30 - 12:50, ECS 125

By the end of the course, it is expected that each student will be capable of examining a biological response and hypothesizing which underlying genetic and/or biochemical process defines the response. Students will then be able to design experiments, including all relevant controls, to test their proposed hypothesis.

Important dates and evaluation:

EVALUATION	Date
5% DJB assignment	<i>in class, group submission</i> Thursday, February 28
25% DJB test 1	<i>1 hour, 15 min - in class</i>

Tentative Class Schedule:

topic	comments
1 Introduction	
2 DNA	
a) gene structure and expression	comparison between prokaryotic and eukaryotic systems
3 RNA	
a) structure and regulation	mRNA stability, riboswitches
b) CRISPR	RNA silencing in prokaryotes, gene editing
4 Protein	
a) two component systems	introduction to prokaryotic protein signalling
b) protein splicing	inteins and exteins, applications
c) translational surveillance	identification and destruction of aberrant proteins in prokaryotes
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