

BIOL 4890L - Molecular Genetics Laboratory

Summer 2026 Syllabus, Section 01, CRN 30029,

Credit hours: 1

Instructor

David Asch

Professional Qualifications:

Ph.D University of Kansas

Master's, Education, Creighton University

Bachelor's, University of Nebraska-Lincoln

Chairperson

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Preferred Contact Method: E-mail (Phone message is much more uncertain.)

Communication Expectations:

I will attempt to answer messages within 24 hours. Messages after 3pm will be answered the next day.

Course Description

4890L. Molecular Genetics Laboratory. Introduction to basic molecular techniques such as transformation, use of restriction enzymes, agarose gel electrophoresis, and polymerase chain reaction (PCR). Three hours lab. Prereq.: BIOL 4890 or concurrent. 1 s.h.

Course Readings

Group	Title	Author	ISBN
Required	No text		

No text

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Day	Date	Proposed Topic	Due/To Prepare for Class
Tue	6/30	No lab	
Thu	7/2	Intro Restriction Digest	
Tue	7/7	Restriction Digest agarose gel	
Thu	7/9	Isolation Plasmid DNA	
Tue	7/14	Agarose gel plasmid DNA Lab report on restriction digest and gel due	
Thu	7/16	Transformation of E coli	
Tue	7/21	Lab Exam I Lab report on Plasmid isolation and gel due Gather data on Transformation	
Thu	7/23	PCR Lab report on Transformation due	
Tue	7/28	Agarose gel on PCR	
Thu	7/30	Isolation of Genomic DNA	

Tue	8/4	Dilutions Agarose gel on genomic DNA Lab report on PCR and gel due.
Thu	8/6	Gather data on dilutions Lab report on genomic DNA due
Tue	8/11	Lab Exam II Lab report on dilutions due
Thu	8/13	No lab

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.