

SYLLABUS – BIOMED 522
METHODS IN CELLULAR BIOLOGY– FALL SEMESTER 2020
October 12 – December 4

TIME AND PLACE – Class will be held on Mondays, Thursdays and Fridays from 11:00 – 12:00 pm. Class will take place via zoom. Zoom Meeting ID: **975 6733 4366** Password: **CellsRock**

COURSE DIRECTOR

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INSTRUCTORS

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TEACHING ASSISTANT

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COURSE GOALS AND OBJECTIVES

Biomed 522 is a graduate level course intended for students who plan a professional career in the biomedical sciences. Our goal is to provide an overview of experimental methods critical for modern cell biology. As such, this course is designed to parallel the Biomed 508, Advanced Cell Biology Course.

CODE OF ETHICS & PROFESSIONALISM

Although students may choose to work on various parts of the course in groups, all students are expected to turn in written work that has been prepared individually. Ideas and information derived from group interactions must be acknowledged. Students must not copy from printed references, from the Internet or from other students. All work must be properly referenced. *It is unethical to represent others' work as your own.* Students found plagiarizing works from any source will be given a failing grade in the course.

Your presence throughout the course and your on-time arrival to class are your professional responsibility to your colleagues. Attendance is mandatory. To obtain an excused absence, students are required to notify the block leader by e-mail in advance. Evaluation of the validity of the excused absence is up to the block leader, but in general, only illness will be considered a valid excuse. Failure to obtain an excused absence will result in the loss of credit for that day's assignment.

ASSESSMENTS AND GRADES

We will attempt to balance content and scientific process by using both lectures and question/ answer/discussion formats. The grade will be determined based on the following formula:

In Class Assignments = 100% of your final 522 grade for the later 8 weeks of the semester (During 508). Each week, the course instructor will assign homework worth 20 points. **20 points/week: 160 total points (The other 50% of your grade will come from the grade you earned in the first 8 weeks of the semester during the BIOM 507 course.)**

WEB PORTAL – UNM LEARN – We will be using UNM Learn to upload lectures and assignments for the class. To log on, use your UNM NetID. The link to the portal is <https://learn.unm.edu/>.

SCHEDULE – FALL 2020 BIOMED 522 – METHODS IN CELL BIOLOGY MON, THURS & FRI: 11:00 – 12:00 PM – ZOOM / DOMENICI NORTH EAST 2410

	MON:	THURS:	FRI:
Week 1:	10/12: LIDKE	10/15: LIDKE	10/16: MORTON
Week 2:	10/19: CANNON	10/22: CANNON	10/23: DESAI
Week 3:	10/26: NEUMANN	10/29: NEUMANN	10/30: NEUMANN
Week 4:	11/2: JOHNSON	11/5: JOHNSON	508 EXAM 1 – NO CLASS
Week 5:	11/9: MORTON	11/12: MORTON	11/13: MORTON
Week 6:	11/16: LIDKE	11/19: LIDKE	11/20: PAFFETT
Week 7:	11/23: GILLETTE	THANKSGIVING BREAK	THANKSGIVING BREAK
Week 8:	11/30: STEINKAMP	12/3: STEINKAMP	12/4: STEINKAMP

Week 1:

10/12 and 10/15: **Diane Lidke:** Overview of Fluorescence and Fluorescent Protein Technologies
Microscopy: Imaging Modalities and Resolution
10/16: **Russ Morton:** Image Analysis: ImageJ

Week 2:

10/19 and 10/22: **Judy Cannon:** Overview of Antibodies
10/23: **Sharina Desai:** Metabolism Technologies (AIM Core)

Week 3:

10/26 and 10/29: **Aaron Neumann:** Bioconjugation Techniques
10/30: **Aaron Neumann:** Surface Chemistry Analysis

Week 4:

11/2 and 11/5: **Wade Johnson:** Flow Cytometry and Cell Sorting (Flow Cytometry Core)
11/6: **NO CLASS:** The time will be used for the BIOM 508 exam.

Week 5:

11/9 and 11/12: **Russ Morton:** Measurements of Membrane Potential and Ion Transport
11/13: **Russ Morton:** Brain Recovery & Repair CoBRE Preclinical Core

Week 6:

11/16 and 11/19: **Diane Lidke:** Advanced Fluorescent Microscopy Techniques
11/20: **Michael Paffett:** Fluorescence Microscopy Core

Week 7:

11/23/19: **Jennifer Gillette:** Proliferation and Apoptosis

Week 8:

11/30 and 12/3: **Mara Steinkamp:** Mouse Models: Transgenics, Knock Outs and Xenografts
12/4: **Mara Steinkamp:** Small Animal Core