COURSE SUBJECT, NUMBER, AND TITLE
BIOCHEM 924, "Membrane Protein Structure and Function"

CREDITS
1

CANVAS COURSE URL
https://canvas.wisc.edu/courses/92141

COURSE DESIGNATIONS AND ATTRIBUTES
Graduate course attribute

MEETING TIME AND LOCATION
2:30pm - 4:00pm T, 571 HF DeLuca Biochemistry Labs

INSTRUCTIONAL MODE
Face-to-face

SPECIFY HOW CREDIT HOURS ARE MET BY THE COURSE
The course involves 90 minutes of class time every week. Preparation for the class will consist of critical reading of a research paper and related literature, which will take two or more hours on average per week. Each student in charge of presenting will also meet one-on-one with the instructors before the class to discuss the paper and plan their presentation.

INSTRUCTORS
Dr. Baron Chanda, Associate Professor, Biomolecular Chemistry (chanda@wisc.edu)
Dr. Katherine A. Henzler-Wildman, Associate Professor, Biochemistry (henzlerwildm@wisc.edu)
Dr. Alessandro Senes, Associate Professor, Biochemistry (senes@wisc.edu)
Dr. Michael R. Sussman, Professor, Biochemistry (msussman@wisc.edu)

INSTRUCTOR AVAILABILITY
By appointment

OFFICIAL COURSE DESCRIPTION

Membrane proteins comprise over a fourth of proteins encoded in any given genome, providing many vital functions to all cells. For example, ion channels and pumps modulate the membrane potential and help conduct information via nerves and other long distance conducting tissue. Transporters mediate the uptake and secretion of molecules. Receptors, such as G protein coupled receptors and receptor protein kinases, transfer information about the environment to the inside of the cell. Membrane proteins also contribute to the shape of the cell, the structure of the membrane and a myriad of other functions. Structure/function relationships for this critical class of proteins are discussed, addressing questions such as "how do membrane proteins fold," "how do certain important classes of membrane proteins work," "what are the challenges in studying membrane proteins," and "what methods are available for studying their biophysical properties?"

REQUISITES

Graduate/Professional student standing

LEARNING OUTCOMES

- Synopsize recent and classic research literature about membrane proteins structure and function, including relevant methods, biological systems, or general principles.

- Critically analyze data and conclusions presented in research literature, present it with clarity and discuss it with peers.

GRADING AND GRADING SCALE

Students will be graded 50% on their presentation and 50% on participation.

Grading scale for presentations (0-50 points):

Each student will be required to present a recent scientific article on a topic that is relevant to the subject of the seminar, cover its most relevant background literature, and lead a group discussion on the topic. The following rubric will be applied.

Presentation score criteria:	**Score** 5=excellent 0=poor
1) A reasonable bottom line / outline was presented at the beginning of the presentation.	
2) Sufficient background was given to understand the topic.	
3) The presentation was presented in a logical order.	
4) The terminology was understandable and a minimum of jargon was used.	
5) The methodology was explained well.	
6) The scope of the presentation was well suited for the time and audience.	
7) The slides were clearly visible and easy to follow.	
8) The speaker responded well to questions.	
9) The speaker was enthusiastic about their subject.	
10) Overall quality of the presentation.	
TOTAL (Max = 50)	

Grading scale for participation (0-50 points):

A maximum of 50 participation points will be assigned based on reading and understanding of the assigned reading material, which will be evaluated based on the student's participation in the in-class discussion using the following rubric:

Participation score criteria:	**Score** 10=excellent 0=poor
1) The student was consistently prepared on the reading material.	
2) The student asked valid questions during discussions.	
3) The student answered other student questions.	
4) The student contributed original and valid points to the discussions.	
5) The student provided valuable feedback to the presenter.	
TOTAL (Max = 50)	

Final grading scale (Note: AB and BC grades are not offered)

F=0-60
D=61-70
C=71-80
B=81-90
A=91-100

- **RULES, RIGHTS, AND RESPONSIBILITIES**
  See The Guide's Rules, Rights and Responsibilities

ACADEMIC INTEGRITY

By enrolling in this course, each student assumes the responsibilities of an active participant in UW-Madison's community of scholars in which everyone's academic work and behavior are held to the highest academic integrity standards. Academic misconduct compromises the integrity of the university. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these acts are examples of academic misconduct, which can result in disciplinary action. This includes but is not limited to failure on the assignment/course, disciplinary probation, or suspension. Substantial or repeated cases of misconduct will be forwarded to the Office of Student Conduct & Community Standards for additional review. For more information, refer to studentconduct.wiscweb.wisc.edu/academic-integrity/.

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

McBurney Disability Resource Center syllabus statement: "The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform faculty [me] of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. Faculty [I], will work either directly with the student [you] or in coordination with the McBurney Center to

identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA." http://mcburney.wisc.edu/facstaffother/faculty/syllabus.php

DIVERSITY & INCLUSION

Institutional statement on diversity: "Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals.

The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world." https://diversity.wisc.edu/