

Golden-BIMM 194/BGGN 283, Fall Quarter 2022

Title: Biological Rhythms

Instructor: Prof. Susan Golden

Office: 4824 AP&M (Applied Physics & Mathematics); Phone: (858) 246-0658

Email: sgolden@ucsd.edu (please put BIMM 194 or BGGN 283 in subject line of emails)

Office hours: in-person after each class, Th 1:50 PM (for longer discussion we will go outside); or by appointment in my office or on Zoom (Zoom link will be on Canvas). To make an appointment send an email with a few suggested times to meet.

Date/Time: Thursdays 12:30 PM-1:50 PM

Course Summary: This class will cover current topics in molecular and behavioral rhythms related to circadian, annual, tidal, or lunar timescales, and topics that may range from human sleep and performance to processes in environmental and laboratory organisms.

Class Meetings: Classes are **in-person** and will be interactive. Questions, discussion, and participation by everyone in the class is encouraged. There will be a **sign-in sheet** for each class. You will enhance your learning by active participation, asking questions, and expressing ideas.

Class periods: The format will be a combination of lectures and facilitated discussion of review articles and primary papers from the scientific literature.

Class materials and assignments: Canvas at <https://coursefinder.ucsd.edu> or <https://canvas.ucsd.edu>

Grading: Grades will be based on a combination of: attendance in class (80 points max) and a weekly quiz based on online materials, assigned readings, or class presentations (120 points max), for a total of 200 points. No final exam or extra credit.

Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F
Minimum Score	194	180	174	168	162	154	148	142	134	128	<128
Percent	97	90	87	84	81	77	74	71	67	64	<64

Attendance: You will receive 10 points for each class attended. You may miss one class period without affecting your grade (80 points possible, no points associated with the first class). Questions, comments, and suggestions are encouraged at any time during the lecture.

Quizzes: There will be nine quizzes, one every week after the first class, each worth 15 points. Your lowest quiz score will be dropped (120 points possible). If you miss a quiz, it will be considered as your dropped quiz. Late submissions will incur a penalty. Quizzes will be posted by 5 PM on Tuesday of each week to be submitted before class the following Thursday, to ensure that students are prepared for class discussions. Quizzes will be taken through **Canvas**, and may be multiple choice or short open responses. Quizzes are open book but must be taken individually with no collusion or outside help. For this class, open book means you can access the class paper, other research papers, videos, and reference material, but you cannot post the homework question for others to answer or get answers from any other person or group. No Chegg – your own work and thought is required for your learning.

BGGN 283 Graduate Students ONLY: Graduate students taking BGGN 283 have an additional requirement for the course. Each graduate student will work with the professor to contribute to presenting a method, concept, or short topic summary to the class.

New Financial Aid Requirement: Commencement of Academic Activity. UC San Diego instructors are required to certify whether students have commenced academic activity in order to satisfy the requirement set forth by the U.S. Department of Education (ED). Per the ED, this certification should be done by the end of the second week of instruction. This requirement is satisfied by taking the “quiz” “First Day Survey: Prior Knowledge #FinAid” on Canvas. Your responses are private and do not impact your grade in this course.

Statement on Office for Students with Disabilities (OSD):

To receive accommodation, students must present their “Authorization for Accommodation” (AFA) form provided by the Office for Students with Disabilities (OSD) to the instructor. It is the student’s responsibility to make sure class and exam schedules for all their classes do not have any conflicts.

Statement on Academic Integrity:

Integrity of scholarship is essential for an academic community. The University expects that both faculty and students will honor this principle and in so doing protect the validity of intellectual work. For students, this means that all academic work will be done by the individual to whom it is assigned, without unauthorized aid of any kind. The consequences of being caught cheating can be severe.

Information can be found here:

<http://www.ucsd.edu/current-students/academics/academic-integrity/index.html>

Students are expected to do their own work, as outlined in the UCSD Policy on Integrity of Scholarship:

<http://senate.ucsd.edu/Operating-Procedures/Senate-Manual/Appendices/2>

Academic misconduct cannot be tolerated. Any student who engages in suspicious conduct will be confronted and subjected to the disciplinary process. Cheaters will receive a failing grade on the exam or assignment, and/or in the course. They may also be suspended from UCSD pursuant to university guidelines. (Translation: don’t cheat!)

Academic misconduct includes but is not limited to:

1. Cheating, such as using “crib notes” or copying answers from another student during the exam.
2. Plagiarism, such as using the writings or ideas of another person, either in whole or in part, without proper attribution to the author or the source. Copying anything from any source is plagiarism if the source is not clearly cited. Plagiarism is stealing someone else’s ideas and presenting them as your own.
3. Collusion, such as engaging in unauthorized collaboration on exams or assignments, completing for another student any part or the whole of an exam or assignment, or procuring,

providing or accepting materials that contain questions or answers to an exam or assignment to be given at a subsequent time.

General guidelines for reading research papers:

Research papers are written for people who already know something (or a lot) about the subject matter. Students will need to look up definitions and other information to understand the paper. Students are not expected to understand everything in the articles, but should pay attention to the following:

1. Identify the questions being asked in the paper – the author's hypotheses.

Frequently the introduction or the first few paragraphs will present background information and raise the questions that will be addressed in the paper.

2. Identify the main conclusions in the paper.

The main conclusions will be summarized in the abstract, are often summarized at the end of the introduction, and are presented in the discussion/conclusion section. Determine why the conclusions are important.

3. Examine the data and experiments that were performed to answer the questions.

The experiments and data will be briefly summarized in the abstract and will be presented in the Methods and Results sections of the paper. What was the question (hypothesis) each experiment was trying to address? What was the experimental design (the approach and logic) used to answer the questions? What do the data show? Did the experiment answer the question or not? Are the authors' conclusions strongly or weakly supported by the experimental data?

4. For each individual experiment:

Determine how the experiment was done. Examine the data. Do you understand the elements and axes on the figures? Consider the authors' conclusions and decide if the conclusions are valid. Decide if proper experimental controls were included. Consider any caveats or concerns raised by the authors about their data. Think about alternative conclusions or explanations for the data – maybe the authors are wrong!

Search "How to Read and Understand a Scientific Paper"

For example:

[How to Read and Comprehend Scientific Research Articles - YouTube](https://www.youtube.com/watch?v=t2K6mJkSWoA)

<https://www.youtube.com/watch?v=t2K6mJkSWoA>

How to Read and Understand a Scientific Paper: A Step-by-Step Guide for Non-Scientists

https://www.huffingtonpost.com/jennifer-raff/how-to-read-and-understand-a-scientific-paper_b_5501628.html