

Sleep, Health and Performance 01:377:336

Department of Kinesiology and Health, Rutgers University
Spring, 2018

COURSE INFORMATION:

Day and time: Monday and Thursday 12:33-1:55 PM
Location: Heldrich Science Building, Room 204

INSTRUCTOR:

Andrea M. Spaeth, Ph.D.
Office: Loree 002
Phone: 848-932-0271
Email: ams853@kines.rutgers.edu
Office hours: Monday and Thursday 11-12:30

ASSIGNED READINGS:

Peer-reviewed journal articles that review the relevant literature to each lecture topic are available as PDFs on the course Canvas site. Assigned readings will be discussed during the lecture in which they were assigned. (see "Class Participation" for more detail)

LECTURES:

The lectures are designed to complement the assigned readings and do not merely repeat the same material. PowerPoint slides used in the lecture will be available on Canvas 24 hours before the lecture for which they will be used. Bring a copy of the lecture slides with you to each class (laptops and other electronic devices are not permitted in the classroom) for note-taking. You are encouraged to ask questions during lecture and engage in the discussion of the assigned reading.

COURSE DESCRIPTION:

This undergraduate course will provide a basic overview of the biology underlying sleep and circadian rhythms, introduce you to the causes and treatments of insufficient sleep and sleep disorders, and evaluate the role of sleep and circadian timing in maintaining health, improving performance and enhancing safety. When examining the relationship between sleep, health and performance, the course will focus on functions of both the brain and body. Personal and public policy approaches to sleep issues (e.g., drowsy drivers and shiftwork schedules) will also be addressed.

COURSE OBJECTIVES:

By the end of the course, the successful student will be able to (1) display knowledge of the systems underlying sleep and circadian biology, (2) identify and explain the causes and consequences of insufficient sleep and (3) recognize the importance of sleep hygiene for health and optimal performance. The successful student will also improve critical thinking and analytical skills by completing the class project.

EVALUATION:

Exams (4): 280 points, 70% of total grade

Each exam will be a combination of multiple choice, true/false, fill-in-the-blank and short answer questions that cover the lecture topics from that unit. Each exam will be worth 70 points.

Class Participation: 40 points, 10% of total grade

Attendance and engagement in class discussions of assigned readings is expected. During each class, students selected at random will be called on to answer questions about the reading.

Written Assignment: 80 points, 20% of total grade

You will be assigned a high-impact, peer-reviewed journal article on a sleep/circadian topic and two articles in the popular media (e.g., Time Magazine, New York Times) that summarize and discuss the original scientific

paper. After reading both the popular media articles and the original scientific paper, you will write a 3-page paper that has the following components: (1) a summary of each section of the scientific paper (introduction, methods, results and conclusion) and (2) a critical analysis of how accurately the scientific paper is portrayed in the popular media articles. The written assignment is due at the beginning of class on the day of the final exam period. Students must be on time to class; assignments handed in after 10 minutes following class start time will receive a zero.

Format: Papers should be double-spaced with 12-point Times New Roman font and 1-inch margins. Your name should be in the top left corner. Do not insert subtitles or an extra line between paragraphs and put only one space after periods.

GRADING:

360-400 points	90-100%	A	340-359 points	85-89.9%	B+
320-339 points	80-84.9%	B	300-319 points	75-79.9%	C+
280-299 points	70-74.9%	C	240-279 points	60-69.9%	D
0-239 points	00-59.9%	F			

CLASS POLICIES AND RESOURCES

This course schedule and course guidelines are all subject to (and likely will) change. It is your responsibility to make yourself aware of any and all changes by attending class and maintaining an open line of communication with the professor.

Absences:

If you are on an athletic team and will be missing class, you should provide the instructor with a written schedule (of road trips) prior to absence. Prior to, or immediately following your road trip (the next class day), you should provide the instructor with the University Approved Excuse. Failure to do so will result in an unexcused absence. This policy will also govern any University Approved Excused Absence.

Students will be allowed to make up assignments only in the event that a University Approved Excuse is provided prior to or the following class day after the absence. (NOTE: The University will not provide approved excuses for visits to the Student Health Center. These excuses will not be accepted unless the physician indicates that student should not attend class.) Make-up tests must be taken prior to absence, unless instructor indicates otherwise.

Laptops, Cell Phones and other Electronic Devices:

Laptops, tablets etc. are not permitted in class. Note-taking should be done using pen/pencil and paper. Cell phones should either be turned off or on silent mode during class and examinations. If you are expecting an emergency call, please inform the instructor before class begins.

Honor Policy:

Rutgers University is built upon a strong foundation of integrity, respect, and trust. All students are expected to know and follow the academic integrity policy of Rutgers University. This policy can be found at <http://ctaar.rutgers.edu/integrity>. Should you have any questions about this policy, please contact the instructor.

Disability Services

Phone: (848) 445-6800

Address: Lucy Stone Hall, Suite A145, Livingston Campus, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854

Website: <https://ods.rutgers.edu/>

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: <https://ods.rutgers.edu/students/documentation-guidelines>.

If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. **Share this letter with your instructors and discuss the accommodations with them as early in your courses as possible.** To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>.

Student-Wellness Services:

Just In Case Web App

<http://codu.co/cee05e>

Access helpful mental health information and resources for yourself or a friend in a mental health crisis on your smartphone or tablet and easily contact CAPS or RUPD.

Counseling, ADAP & Psychiatric Services (CAPS)

Phone: (848) 932-7884

Address: 17 Senior Street, New Brunswick, NJ 08901;

Website: www.rhscaps.rutgers.edu/

CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professional within Rutgers Health services to support students' efforts to succeed at Rutgers University. CAPS offers a variety of services that include: individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community and consultation and collaboration with campus partners.

Violence Prevention & Victim Assistance (VPVA)

Phone: (848) 932-1181

Address: 3 Bartlett Street, New Brunswick, NJ 08901

Website: www.vpva.rutgers.edu/

The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty.

Scarlet Listeners

Phone: (732) 247-5555

Website: <http://www.scarletlisteners.com/>

Free and confidential peer counseling and referral hotline, providing a comforting and supportive safe space.

Important Dates

Add/Drop Period: January 22-30, 2019

- Tuesday 1/29/2019 is the last day to drop a course without a "W".
- Adding a class after January 30 requires permission from the course instructor for late registration.
- There are NO refunds for withdrawing from a class after January 29.
- Traditional students may use WebReg to withdraw from courses through March 25 as long as they retain 12 credits of scheduled classes. Traditional students MUST maintain a minimum load of 12 GRADED credits ("W" is NOT considered to be a grade); the maximum credit load is 20.5 credits.
- Non-traditional students may use WebReg to withdraw from courses through March 25 as long as they retain 1 active course.

Academic Calendar

Regular Classes Begin

Tuesday, January 22

Saturday Classes Begin

Saturday, January 26

Last Day to Drop a Course without a "W"

Tuesday, January 29

Last Day to Drop a course by Withdrawal

Monday, March 25

Last Day to Withdraw from *school*

Monday, April 22

Last Day of Classes

Monday, May 6

Reading Days

Tuesday and Wednesday, May 7-8

First Day of Final Exams

Thursday, May 9

Last Day of Final Exams

Wednesday, May 15

OVERVIEW OF SEMESTER

Class #	Date	Lecture Topic	Assignment
1	01/24/19	Overview of course	Syllabus
2	01/28/19	Evolution of sleep & circadian rhythms	Lyamin (2017)
3	01/31/19	Neurobiology of circadian rhythms	Aschoff (1965)
4	02/04/19	Neurobiology of sleep	Yetish (2015)
5	02/07/19	Sleep & circadian pharmacology	Spaeth (2014)
6	02/11/19	Coma, hibernation, anesthesia & sleep	Blanco (2016)
7	02/14/19	Neurobiology of dreaming	Horikawa (2013)
8	02/18/19	---	Exam 1
9	02/21/19	Individual differences in sleep	Pellegrino (2014)
10	02/25/19	Sleep in women	Olcese (2013)
11	02/28/19	Circadian Disorders	Eastman (2016)
12	03/04/19	Sleep Disorders	Nohynek (2012)
13	03/07/19	Sleep disruption due to disorder/disease	Berger (2003)
14	03/11/19	Lifestyle causes of sleep loss	Basner (2014)
15	03/14/19	---	Exam 2
16	03/18/19	<i>Spring Break – NO CLASS</i>	---
17	03/21/19	<i>Spring Break – NO CLASS</i>	---
18	03/25/19	Consequences of sleep loss in rat	Everson (2011)
19	03/28/19	Immune function	Prather (2015)
20	04/01/19	Metabolism & weight regulation	Thaiss (2014)
21	04/04/19	Circulatory systems	Yang (2017)
22	04/08/19	Mental health	Minkel (2012)
23	04/11/19	Cognitive performance	Van Dongen (2003)
24	04/15/19	---	Exam 3
25	04/18/19	Education	Phillips (2017)
26	04/22/19	Sleep forensics	Cartwright (2004)
27	04/25/19	Workplace safety	Arzalier-Daret (2017)
28	04/29/19	Driving, transportation	Tefft (2018)
29	05/02/19	Physical performance	Mah (2011)
30	05/06/19	Extreme environments	Basner (2013)
Final Exam Period: 05/09/19, 8:00-11:00 AM			Exam 4 Written Assignment