

**CLPS0120 Syllabus: Class Outline and Policies**

Instructor: Mary A. Carskadon, Ph.D.  
 Campus Office: Metcalf, Room 133  
 Student Hours: Monday 9:00 to 10:30 am by appointment  
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Classroom: CIT 227  
 Exam Group 15  
 Exam time = 2:00 pm 12/19/18

Lecture: Monday 3:00-4:20 pm  
 Journal Club: Monday 4:30-5:20 pm  
 Rooms = CIT 227, Metcalf 103, 105, 31

**Aims**

This course has three primary goals: (1) to provide a basic introduction to the study of sleep and an overview of sleep, including measurement, bioregulation, ontogeny, phylogeny, physiology, psychology, and sleep disorders; (2) to provide a basic introduction to methods of studying behavior using modes of analysis common to experimental psychology, behavioral science, and neuroscience in the context of a weekly “journal club;” (3) to stretch students’ experiences beyond the overview of course material to encourage greater understanding of the interactions of sleep and society through a final project that contains a ‘public service’ component. Class meetings are lecture style with discussion; journal club sessions provide opportunities for additional leadership, depth, and content.

Throughout the semester, selected articles from primary research literature are dissected each week in journal club to facilitate learning about scientific literature and applying critical thinking by preparing article reviews that identify the research problem, methods, and conclusions and that provide a critical summary of strengths and weaknesses. Helpful to this process will be identifying such important components as hypothesis/specific aim, dependent and independent variables, data collection measures, and statistical methods, as well as a clear assessment of conclusions. These exercises are complemented by a laboratory tour to introduce sleep measurement tools and by problem sets that sometimes involve deriving hypotheses or expressing how a specific hypothesis might be tested or gathering and evaluating data on yourself or your classmates or other related activities. Occasional in-class activities complement other features of the course material. You are expected to use simple data assessment/analysis tools (measures of central tendency and variability, as well as such assessments as t-test, chi square, scatter plots, and correlation) in certain of these exercises.

You should come with an inherent interest in learning about and willingness to participate in understanding the phenomenology that defines sleep, the biology that regulates sleep, the physiological changes accompanying sleep, and the role sleep plays in mental and physical health and illness. Students who have

taken CLPS 0010, CLPS 0020 or NEUR 0010, or who did well in an AP course in psychology or physiology will be better prepared to enjoy and succeed in this class.

### Breakdown of Credit Hours

Across the semester, students will spend 2.5 hours per week in 12 class periods (30 hours total); required reading and reviewing lecture slides for the seminar meetings is expected to take up approximately 6-9 hours per week across 14 weeks (~84-120 hours). In addition, weekly assignments (problem sets), study guides, journal club worksheets and presentation preparation, and researching and preparing the final project is estimated at total of approximately 55 hours over the course of the term. Finally, peer evaluations at the end of the semester will take about 3 hours.

### Required Readings\*

1) **The Twenty-Four Hour Mind, The Role of Sleep and Dreaming in our Emotional Lives**, by Rosalind D. Cartwright (on Amazon.com price range = \$9.93-\$19.95)

[https://www.amazon.com/Twenty-four-Hour-Mind-Dreaming-Emotional/dp/0199896283/ref=tmm\\_pap\\_title\\_0?encoding=UTF8&qid=&sr=](https://www.amazon.com/Twenty-four-Hour-Mind-Dreaming-Emotional/dp/0199896283/ref=tmm_pap_title_0?encoding=UTF8&qid=&sr=)

-Physical copy on reserve in library  
-Link to full text available on OCRA

2) **Sleep, A Very Short Introduction**, by SW Lockley and RG Foster (on Amazon.com price range = \$2.99-\$11.73).

[https://www.amazon.com/Sleep-Introduction-Steven-W-Lockley/dp/019958785X/ref=pd\\_sim\\_14\\_1?encoding=UTF8&pd\\_rd\\_i=019958785X&pd\\_rd\\_r=a33ab905-b11e-11e8-a8ea-092258445276&pd\\_rd\\_w=2oaJq&pd\\_rd\\_wg=uxbTW&pf\\_rd\\_i=desktop-dp-sims&pf\\_rd\\_m=ATVPDKIKX0DER&pf\\_rd\\_p=18bb0b78-4200-49b9-ac91-f141d61a1780&pf\\_rd\\_r=ATTC2MFTW2H2Y4FYJ9K8&pf\\_rd\\_s=desktop-dp-sims&pf\\_rd\\_t=40701&psc=1&refRID=ATTC2MFTW2H2Y4FYJ9K8](https://www.amazon.com/Sleep-Introduction-Steven-W-Lockley/dp/019958785X/ref=pd_sim_14_1?encoding=UTF8&pd_rd_i=019958785X&pd_rd_r=a33ab905-b11e-11e8-a8ea-092258445276&pd_rd_w=2oaJq&pd_rd_wg=uxbTW&pf_rd_i=desktop-dp-sims&pf_rd_m=ATVPDKIKX0DER&pf_rd_p=18bb0b78-4200-49b9-ac91-f141d61a1780&pf_rd_r=ATTC2MFTW2H2Y4FYJ9K8&pf_rd_s=desktop-dp-sims&pf_rd_t=40701&psc=1&refRID=ATTC2MFTW2H2Y4FYJ9K8)

-Physical copy on reserve in library

**\* A detailed list of additional required readings that are placed in our e-Reading site is provided on the course Reading List on the course web site.**

**Recommended Readings** readings are suggested from *The Promise of Sleep*, by William C. Dement and Christopher Vaughn, which is a lengthy, but easily consumed book.

1) **The Promise of Sleep by William Dement** (On Amazon.com price range = \$5.99-\$15.00)

[https://www.amazon.com/Promise-Sleep-Medicine-Connection-Happiness/dp/0440509017/ref=sr\\_1\\_1?ie=UTF8&qid=1536161641&sr=8-1&keywords=promise+of+sleep+dement](https://www.amazon.com/Promise-Sleep-Medicine-Connection-Happiness/dp/0440509017/ref=sr_1_1?ie=UTF8&qid=1536161641&sr=8-1&keywords=promise+of+sleep+dement)

-Physical copy on reserve in library

2) We also recommend *Wide Awake and Dreaming*, by Julie Flygare (Brown '05) for those interested in a young patient's perspective of narcolepsy.

**Wide Awake and Dreaming by Julie Flygare** (On Amazon.com price range = \$4.90-\$16.26)

[https://www.amazon.com/Wide-Awake-Dreaming-Memoir-Narcolepsy-ebook/dp/B00AOBIPFC/ref=sr\\_1\\_1?ie=UTF8&qid=1536161793&sr=8-1&keywords=wide+awake+and+dreaming](https://www.amazon.com/Wide-Awake-Dreaming-Memoir-Narcolepsy-ebook/dp/B00AOBIPFC/ref=sr_1_1?ie=UTF8&qid=1536161793&sr=8-1&keywords=wide+awake+and+dreaming)

-Physical copy on reserve in library

### Journal Club:

Weekly small-group **Journal Club** meetings (beginning in week 2) are designed for you to gain a deeper appreciation for the course content through close reading and explication of primary research literature. Each student will lead and facilitate the "journal club" discussion one time during the semester [check web

site to sign up], providing you an opportunity to develop analytical and presentation skills. Students should aim to present key information from the article and to facilitate a class discussion. [See journal club facilitation handout available on the webpage.] Each journal club session will be 30 minutes. TAs assist in the journal club and provide informal review and discussion of course material as questions arise, including review of study guides, problem sets, and worksheets. These meetings occur in small groups on Monday afternoons after the lecture portion of the class time. Participation in the journal club by submitting the weekly review and taking part in discussion accounts for 15% of the course grade.

### **Lab Tour: An Opportunity, Not an Obligation**

A tour/open house of Dr. Carskadon's laboratory will be announced later in the semester. This lab tour is not mandatory; however, it is recommended, particularly for those students with a limited background and boundless interest. Attendance (although not required) will be monitored and contributes to the course grade in the event that the final grade average is within .5 points of the next better letter grade.

### **CLPS0120: LECTURE SCHEDULE, 2018**

#### **Date   Topic**

09/10 Introduction to course structure and pedagogy.

**Why sleep?** A brief introduction to the topic.

**Discussion:** What do you want to learn? What do you think about sleep?

**What is sleep?** Introduction to the scientific study of behavior and sleep; introduction to the 2-process model of sleep regulation. Measurement and characteristics of normal human sleep.

09/17 **What does sleep look like?** Fundamentals of normal human sleep. States, stages, measurement, course of events through the night, NREM-REM cycle. Introduction to sleep phenomenology.

**Who sleeps? Phylogeny.** Sleep in other species.

09/24 **Where is NREM sleep controlled? The sleeping brain:** Intro to brain anatomy and chemical signaling. Brain regulatory regions, circuits, chemistry, S-W homeostasis.

10/01 **Where is REM sleep controlled? The sleeping brain:** REM sleep anatomy and chemistry, NREM-REM cycle.

10/08 Indigenous Peoples' Day: **NO CLASS (Catch up on your reading!)**

10/15 **When sleep? How does the body keep track of time?** Circadian Process—neuroanatomy, measurement, regulatory process (e.g., phase response curve to light). The temporal regulation of sleeping and waking.

**10/22 Midterm Exam in Class (no exceptions!) Followed by lecture. No Journal Club.**

10/22 **Who sleeps? Ontogeny.** Developmental aspects of sleep behavior and sleep-wake regulation; focus on adolescence.

10/29 **What happens to your body during sleep? Sleep physiology.** Autonomic motor system, breathing (sleep apnea), hormones, motor activity (REM behavior disorder), temperature regulation, sexual activation.

**10/29 DUE DATE Outline and reference list for final project.** [Due at 3:00 pm, start of class.]

11/05 **The sleeping mind: Introduction to Dreaming—How are dreams made? What are dreams made of?** Biology of dreaming. Dream phenomenology; psychology of dreaming.

11/12 **The sleeping mind—what’s on your sleeping mind? What are dreams made for?** Problem solving, creativity, mood, psychopathology, forensics.

11/19 **The sleeping mind: How does sleep affect learning and memory?** Characteristics of memory formation; sleep-enhancing effects on learning.

**Guest Presenter:** Jared Saletin, PhD, assistant professor, Brown Medical School and Sleep for Science Research Lab

**11/19 DUE DATE FINAL PROJECT TOPIC, OUTLINE, and REFERENCES [Due by 3:00 pm.]**

**11/22 Happy Thanksgiving!**

11/26 **The sleeping mind—do we need sleep? How alert are you? How does sleep impact real-world function?** Sleepiness/alertness: measurement. Shift work, safety, and health.

12/03 **What happens when sleep goes wrong? Sleep disorders: What they are? Who has them?**

**Guest Presenter:** To be determined

12/10 **Final project presentations and peer review.**

12/? **!!! FINAL EXAM REVIEW SESSION!!!** Date, time, and location to be announced.

12/19 **FINAL EXAMINATION AT 2:00 pm. NO EXCEPTIONS!** Location to be announced. Please make sure that you have no conflict as soon as possible.

**READING.** The reading list is on the COURSE READING LIST posted on the course web page.

**CLASSROOM: LAPTOPS, PDAs.** Please do not use cell phones, personal electronic equipment, or laptops during lecture. [For those with a documented disability, please see the professor with your documentation.]

**ASSIGNMENTS.** Class assignments are of several general types in addition to reading: study guides, problem sets, article worksheets, and the final project. **Study guides** are take-home exercises to be completed by each student *independently* (i.e., by yourself!). Study guides are intended to help keep reading and class attendance on pace and to serve as practice for the midterm and final examinations. **Problem sets** are of several types and may involve collecting data on yourself or responding to questions about your sleep or dreams. I urge you to be as careful, complete, honest, and accurate as you can in doing these assignments in order to garner the greatest benefit from them. Due dates are announced in class and on the web page; late work is not accepted. **Journal club** occurs weekly, and students prepare a summary (one-page) of the assigned article submitted to the course web page by 3pm on Monday. Each student leads the journal club discussion one time during the semester.

## Final Project “Public Service Announcement (PSA)”

Students may choose to work independently or in pairs to prepare a “public service announcement” presentation. Choose a medium that you feel is best for your message and your talents: audio, video, website, organized event, song, or booklet, game, or other incarnation. Students may work in partnerships (maximum of 2 students): all academic criteria of the final project must be met, including a reference list and accuracy of the information. Each member of the team must specify his/her contribution on the PSA Info form and additional information will be provided with handout(s) on the course webpage.

A **hardcopy** outline (or storyboard) and reference list are due on **October 29 by 3:00 pm** in class. Examples include drowsy driving, school start time, learning and memory, coping with sleep apnea, jet lag, and so forth. Consider “myth busting” as a possible approach, too. You will need to include references and citations to specific information. Your PSA will be shared with professor and class on December 10 and graded using a joint grading process by your professor, using input from peer evaluations.

The chief goal of the PSA is that the information is conveyed in a manner that:

- Targets an appropriate audience
- Gives the target audience information in an accessible format
- Has a persuasive tone and message
- Includes recommendations (might be warning signs, behavior change, directions for access to medical evaluation, etc.)
- Involves a creative approach
- Has accurate information

**STUDY BREAK/REVIEW SESSION.** A special **optional** review session for the final exam will be held at a date, time, and location to be announced.

**GRADING.** Grading is based upon **on-time** completion of assignments and quality of performance on the study guides and problem sets, as well as the midterm and final examinations, and final presentation. Grade weighting is as follows: **Journal Club = 15%**, **Problem Sets = 10%**, **Final Project = 15%**, **Study Guides = 10%**, **Midterm Exam = 20%**, **Final Exam = 30%**. A passing grade is determined by a first-level check of the *content-based assessments* (weighted average of Study Guides, Midterm Exam, Final Exam), which must equal or exceed a grade of 70%. In other words, you **cannot pass** the course—even if you have a 70% average overall—unless your weighted grades for the Study Guides (.10) + Midterm (.20) + Final (.30) = at least 70. When the other assignments have been graded and full grades computed, your score must remain at 70 or above to pass. Grade cut-offs (no rounding) are A  $\geq 90\%$ , B  $\geq 80\% < 90\%$ , C  $\geq 70\% < 80\%$ , NC  $< 70\%$ . No extra credit is offered; you can add 0.5% to your final grade if in the border zones by completing peer review of final projects, attending the lab tour, **or** participating in 2+ hours of department research participant pool through the SONA system hosted by the CLPS department. The table below summarizes the components of the grading.

<b>Content-Based Assessments*</b>	Study Guides	10%
	Midterm Exam	20%
	Final Exam	30%
<b>Other Learning Opportunities</b>	Problem Sets	10%
	Journal Club	15%
	Final Project	15%

\*Note: Your weighted average for content-based assessments must be at least 70 or above in order to pass the course.

**STUDY GUIDES:** Study Guides are take-home question sets that are to be worked on by every student independently. The Study Guides are designed as content-based exercises that keep you focused on staying on pace with the class and help give you some experience with the types of items that may be on the midterm and final exams, though the Study Guides have a greater focus on multiple choice and true/false format to enable timely feedback of your performance. Students are encouraged to attempt these exercises after doing assigned reading and reviewing class notes and slides; however, all course resources (except for classmates) are available for you to use in completing these small exercises. Due dates are announced in class and on the course web page; late work is not accepted. Three or four Study Guides will be provided.

**MIDTERM and FINAL EXAMINATIONS.** These examinations include a variety of formats: multiple choice, true/false, short answer, and (very) short essay items. The exams draw heavily from lectures and required readings. Students with special exam-taking needs (e.g., extra time, separate room) must speak to our chief teaching assistant, Leslie McCauley, at least 2 weeks before the scheduled exam to schedule an early start in a separate room. Please send Professor Carskadon documentation from a dean or the office of disability services about your need for special circumstances for testing. The midterm exam will be held on Monday, October 22, at 3:00 pm **without exception**; the final exam will be held on Wednesday, December 19, at 2:00 pm **without exception**.

**PLEASE NOTE:** We will **not** be able to accommodate individual students' exam schedule conflicts (including travel conflicts). Therefore, you are advised to **check your exam schedule and travel plans carefully** before enrolling in this course!

**REMINDER:** To pass the course, acquisition of knowledge about sleep must be demonstrated by achieving a passing grade average (70%) for the Study Guides, Midterm exam, and Final exam. Thus, regardless of performance on final project and other assignments, **you cannot pass the class unless you get a passing grade (70%) for the 3 types of knowledge-based assessments: Study Guides, Midterm exam, and Final exam.**