

*Sleep that knits up the ravelled sleeve of care
The death of each day's life, sore labour's bath
Balm of hurt minds, great nature's second course,
Chief nourisher in life's feast.*

--William Shakespeare

**Experimental/Cognitive Seminar
Sleep and Dreaming**

PSYC 376

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Meeting Time: T & Th 5b (12:50 - 2:00)

Classroom: 235 PPHAC

Office Hours: 9:00 - 10:00 Monday - Thursday

Other times can be arranged by
stopping
by my office, calling or e-mailing
me.

I welcome students to my office. Please stop with questions about the material, your projects, or the exams. I look forward to the opportunity to get to know each of you this semester.

Course Requirements

I. Exams:

There will be several exams administered during the semester (see schedule below for dates). Exams will be comprised of definitional, short answer, and essay type questions. Make up exams will only be administered at if a doctor's note is provided.

II. Sleep/Wake Diary and Dream Log Analysis:

Each student will keep a sleep/wake diary and dream log for a period of time during the semester. You will record a variety of details about your sleep/wake and dream experience.

IIa. Sleep/Wake Diary

A. Complete your sleep/wake diary over a four week period during the semester (do not get too upset if you miss a day here and there)!

B. Read over your diary at least once a week and look for data patterns, such as –

1. weekday vs. weekends?
2. regular schedule vs. irregular?
3. naps: planned vs. spontaneous?
4. changes across the semester?
5. what influences your sleep/wake

schedule

environment, peers, mood, stress, etc.?

6. how much caffeine, alcohol, etc. do you drink on a daily/weekly basis?

C. You will write a paper (3 - 4 pages) describing/analyzing your sleep/wake patterns. Please attend to the issues that are listed above and other questions/issues/topics that are discussed in class or in your readings. Consult Chapter five in Moorcroft as you discuss your data with respect to your body during sleep. Please support your points with descriptive examples from your own diaries, quantitative information from your own diary data, and relevant findings from course readings. Graphing and/or displaying your data in table(s) is highly recommended. Papers should include both quantitative and qualitative

data/information. Below are examples of quantitative data that you should analyze:

1. average weekly total sleep time (weekdays/weekends)
2. average weekly bedtime, risetime (weekdays/weekends)
3. average naptime and total nap sleep time
4. weekend delay: average difference between weekend bedtime and weekday bedtime
5. weekend oversleep: average difference between weekend TST and weekday TST
6. sleep efficiency: amount of time in bed divided by your TST
7. sleep latency: length of time it takes you to fall asleep
8. amount and frequency of caffeine and/or alcohol use
9. length and frequency of night wakings

I Ib. Dream Log Analysis

During the two-month recording period you must select 5 dreams to write-up in your Dream Log. In these entries, discuss your dreams and your ideas about your dreams. Simply describing your dreams is not sufficient. You must WORK with the dream. You might also discuss your attempts to remember dreams, events in your life that might be affecting your dreams, your opinions about dreams and dream interpretation.

For dream interpretation consult Chapter 8 in Moorcroft and for more interpretation in relation to Sigmund Freud and Carl Jung theories and ideas about dreams consult the following website:
<http://www.mythsdreamssymbols.com/>

III. Oral Presentations and Research Paper:

Oral Presentation: Beginning week 11 students will be responsible for oral presentations on the topics of Sleep and Mental Illness and Sleep Disorders (see topic list below). Because two students will share a single topic you will need to be well coordinated and your presentations should be non-overlapping. Each student will be responsible for a thirty-minute portion of one class period. Each student will be responsible for selecting a reading for the class on your assigned topic. Your reading is due to me one week (2 classes) before your presentation.

Research Paper: On the day of your presentation you are to submit an APA style research paper on your topic. Your research paper must include a minimum of seven primary sources and needs to be 8-10 pages in length.

Oral Presentation and Research Paper Topics:

Sleep and Mental Illness:

- Parkinson's Disease
- Depression
- Anxiety Disorders
- Seasonal Affective Disorder

Sleep Disorders:

- Insomnia
- Narcolepsy
- Sleep Apnea
- Nightmares and Night Terrors

IV. Class Participation:

Your attentive presence and prepared participation in the classroom are important both for a successful course and for your successful completion of the course. It is assumed and expected that you will attend class, complete the readings in advance of class, and come prepared to participate actively and thoughtfully in class. You will receive a class participation grade for each and every class session. Students will help to determine their class participation grade by completing a class participation assessment form at the end of each class session.

Evaluation

Exams.....	30 %
Dream Log.....	15 %
Sleep/Wake.....	15 %
Oral Presentation.....	10 %
Research Paper.....	15 %
Class participation & In Class Assignments.....	15 %
Total:	100 %

Required Readings:

Moorcroft, W. H., (2003). Understanding sleep and dreaming. Kluwer Academic/Plenum Publishers.

(Course Packet) Will be distributed in class

Additional readings may be distributed in class or placed on reserve in Reeves Library.

Course Outline

Week 1

Introductions and Syllabus Review (8/26)

The Nature of Consciousness (8/28)

Readings:

Farthing, G.W., (1992). The Concept of Consciousness (Chapter 1) & Characteristics of Consciousness (Chapter 2) in The Psychology of Consciousness. Prentice Hall.

Week 2

Altered States of Consciousness: (9/2)
(The Continuum)

Readings:

Farthing, G.W., (1992). Altered States of Consciousness (Chapter 9) in The Psychology of Consciousness. Prentice Hall.

Measurement of Sleep (9/4)
(Electrophysiological Measures)

Readings:

Moorcroft Chapter 1

Aserinsky, E., & Kleitman, N. (1953). Regularly occurring periods of eye motility, and concomitant phenomena, during sleep. *Science*, 118, 273-274.

Carskadon, M.A., & Rechtschaffen, A. (2000). Monitoring and staging human sleep. In M.H. Kryger, T. Roth, & W.C. Dement (Eds.), *Principles and practice of sleep medicine*, 3rd edition, (pp 1197-1216). Philadelphia: W.B. Saunders.

Week 3

Sleep Assessment and Normal Variations of Sleep (9/9)

Readings:

Moorcroft Chapter 3

Bae, C.J., & Golish, J.A. (2006). The sleep interview and sleep questionnaires. In Lee-Chiong (Eds.) *Sleep: A comprehensive Handbook*, (pp. 967 - 971). John Wiley & Son.

Bootzin, R.R., Manber, R., Loewy, D.H., Kuo, T.F., & Franzen, P.L. (2001). Assessment of sleep and sleepiness In H.E. Adams & P.B. Sutker (Eds.), *Comprehensive Handbook of Psychopathology*, 3rd Ed. New York: Plenum Press. (pp 671-672 & 677-680 only).

Sleep Lab Visit: St. Luke's Sleep Disorders Center
(9/11)

Week 4

Exam I (9/16)

Research Time - SASH conference (9/18)

Week 5

**Neurobiology of Sleep & Chemical and Neuronal
Mechanisms of Sleep** (9/23)

Readings:

Moorcroft Chapter 4

Biological Rhythms (9/25)
(Circadian and Menstrual Rhythms)

Readings:

Moorcroft Chapter 2 (pp. 48 - 55)

Campbell, S.S. (2004). The basics of biological rhythms. (Chapter 2: pp. 35 - 56).

Driver, H.S. (2006). Patterns of sleep in women: An overview. In T. Lee-Chiong (Ed.) Sleep: A Comprehensive Handbook. John Wiley & Sons, Inc.

Week 6

The Need to Sleep (9/30 & 10/2)
(Sleepiness, Sleep Deprivation, and the
Functions of Sleep)

Movie: The Machinist (2003)

Readings:

Moorcroft Chapter 2 (pp. 35 - 47)

Harrison, Y., & Horne, J.A. (1995). Should we be taking more sleep? *Sleep*, 18, 901-907.

Bonnet, M.H., & Arand, D.L. (1995). We are chronically sleep deprived. *Sleep*, 18, 908-911.

Week 7

Fall Recess (10/7)

Sleep/Wake Diary Analysis Time - Yom Kippur
(10/9)

Week 8

Sleep/Wake Diaries Due (10/14)
(Searching for Trends)

Dreaming (10/16)

Movie: *The Science of Sleep* (2006)

Assignment: Review the [mythsdreamsymbols.com](http://www.mythsdreamsymbols.com) website and familiar yourself with Freud and Jung's Theories of Dream Interpretation (<http://www.mythsdreamsymbols.com/>)

Readings:

Moorcroft Part III, Chapters 6 & 7

Week 9

More on Dreaming (10/21)

Readings:

Moorcroft Part III, Chapters 6 & 7

LaBerge, S. (1990). Lucid dreaming: Psychophysiological studies of consciousness during REM sleep. In R.R. Bootzin, J.F. Kihlstrom, & D.L. Schacter (Eds.), *Sleep and cognition* (pp 127-135). Washington, D.C.: APA.

Function of Sleep (NREM and REM) (10/23)

Readings:

Readings: Moorcroft Part IV, Chapters 12 & 13

Week 10

Exam II (10/28)

Dream Log Analysis Due (10/30)

Week 11

Student Presentations (11/4)

Topic: Insomnia

Student Presentations (11/6)

Topic: Narcolepsy

Week 12

Student Presentations (11/11)

Topic: Sleep Apnea

Student Presentations (11/13)

Topic: Nightmares and Night terrors

Week 13

Student Presentations (11/18)

Topic: Parkinson's Disease

Student Presentations (11/20)

Topic: Depression

Week 14

Final Exam Questions on Presentations (11/25)

Thanksgiving Break - no class (11/27)

Week 15

Student Presentations (12/2)

Topic: Anxiety Disorders

Student Presentations (12/4)

Topic: Seasonal Affective Disorder

Week 16

**Final Exam Questions on Final Presentations
Closure and Evaluations (12/16)**

Finals Week

Exam 3: Presentation Topic Material: Review:
articles distributed in class as well as Part IV,
Chapters 9, 10, and 11 of Moorcroft.

**Nightmares and Sleep Disturbances after Traumatic
Events**

Readings:

Wood, J.M., Bootzin, R.R., Rosenhan, D., Nolen-Hoeksema, S., & Jourden, F. (1992). Effects of the 1989 San Francisco earthquake on frequency and content of nightmares. *Journal of Abnormal Psychology, 101*, 219-224.

Lavie, P. (2001). Sleep disturbances in the wake of traumatic events. *New England Journal of Medicine, 345*, 1825-1832.

Parasomnias, REM Behavior Disorder, Night Terrors, Violent Somnambulism

Movie: Sleep Runners (2007)

Readings:

Bootzin, et al. (2001). Sleep disorders. Arousal disorders and Parasomnia (pp 693-697).

Schenck, C.H. (1993). REM sleep behavior disorder. In M.A. Carskadon (Ed.), *Encyclopedia of sleep and dreaming* (pp 499-505). New York: Macmillan.

Broughton, R., Billings, R., Cartwright, R., Doucette, D., Edmeads, J., Edwards, M., Ervin, F., Orchard, B., Hill, R., & Turrell, G. (1994). Homicidal somnambulism: A case report. *Sleep, 17*, 253-264.

Sleep and Psychopathology

Readings:

Bootzin, et al. (2001). Sleep disorders. Sleep disorders associated with mental and neurological disorders (pp 697-701).

Britton, W.B., & Bootzin, R.R. (2004). Near death experience and the temporal lobe. *Psychological Science, 15*, 254-258.

Insomnia

Readings:

Lack, L., & Bootzin, R.R. (2003). Circadian rhythm factors in insomnia and their treatment. In M. Perlis & K. Lichstein (Eds.), *Handbook of Sleep Disorders: Principles and Practice of Behavioral Sleep Medicine* (pp 305-343). New York: John Wiley & Sons.

Bootzin, et al. (2001). Sleep disorders. *Insomnia* (pp 683-686) and *Extrinsic sleep disorders* (pp 690-693).

Bonnet, M.H., & Arand, D.L. (1996). The consequences of a week of insomnia. *Sleep*, 19, 453-461.

Mercer, J.D., Bootzin, R.R., & Lack, L.C. (2002). Insomniacs' perception of wake instead of sleep. *Sleep*, 25, 564-571.

Pharmacological & Cognitive-Behavioral Treatments of Insomnia

Readings:

Bootzin, R.R., Franzen, P.I., & Shapiro, S.L. (in press). Behavioral treatments for insomnia. In M.R. Pressman (Ed.). *Understanding Sleep: The Evaluation and Treatment of Sleep Disorders*, 2nd Ed.. Washington, D.C.: American Psychological Association.

Morin, C.M., Colecchi, C., Stone, J., Sood, R., & Brink, D. (1999). Behavioral and pharmacological therapies for late-life insomnia: A randomized controlled trial. *JAMA*, 281, 991-999.

Manber, R., Bootzin, R.R., Acebo, C., & Carskadon, M.A. (1996). The effects of regularizing sleep-wake schedules on daytime sleepiness. *Sleep*, 19, 432-441.

Oosterhuis, A., & Klip, E.C. (1997). The treatment of insomnia through mass media, the results of a televised behavioural training programme. *Social Science and Medicine*, 45, 1223-1229.

Ansfield, M.E., Wegner, D.M., & Bowser, R. (1996). Ironic effects of sleep urgency. *Behaviour Research and Therapy*, 34, 523-531.

Bootzin, R.R., Herman, C.P., & Nicassio, P. (1976). The power of suggestion: Another examination of

misattribution and insomnia. *Journal of Personality and Social Psychology*, 34, 673-679.

Harvey, A.G. (2002). A cognitive model of insomnia. *Behaviour Research and Therapy*, 40, 869-893.

Narcolepsy

Readings:

Bootzin, (2001). Sleep disorders. Narcolepsy (pp 686-687).

Rosenthal, L.D. (1993). Narcolepsy. In M.A. Carskadon (Ed.), *Encyclopedia of sleep and dreaming* (pp 395-399). New York: Macmillan.

Chicurel, M. (2000). The sandman's secrets. *Nature*, 407, 554-556.

[[Mignot, E. (1998). Genetic and familial aspects of narcolepsy. *Neurology*, 50(Suppl 1), S16-S22.]]

Sleep Apnea

Bootzin, et al. (2001). Sleep disorders. Sleep Apnea (pp 687-689) and Respiratory disorders (pp 701-702).

Westbrook, P.R. (1993). Apnea. In M.A. Carskadon (Ed.), *Encyclopedia of sleep and dreaming* (pp 45-50). New York: Macmillan.

Kleine-Levin Syndrome; Cognitive Consequences of Sleep Apnea and Other Sleep Disorders

[[Bedard, M., Montplaisir, J., Malo, J., Richer, F., & Rouleau, I. (1993). Persistent neuropsychological deficits and vigilance impairment in sleep apnea syndrome after treatment with continuous positive airways pressure (CPAP). *Journal of Clinical and Experimental Neuropsychology*, 25, 330-341.]]

Sleep and Mental Illness

Readings:

Bootzin, et al. (2001). Sleep disorders. Sleep disorders associated with medical disorders, not including respiratory disorders (pp 702-704).

Possible topics and readings: not sure as of yet:

Phylogeny of Sleep

Readings:

Tobler, I. (2000). Phylogeny of sleep regulation. In M.H. Kryger, T. Roth, & W.C. Dement (Eds.), *Principles and practice of sleep medicine*, 3rd edition, (pp 72-81). Philadelphia: W.B. Saunders.

Cognitive Processing (Memory) and Sleep

Readings:

Dinges, D.F. (1990). Are you awake? Cognitive performance and reverie during the hypnopompic state. In R.R. Bootzin, J.F. Kihlstrom, & D.L. Schacter (Eds.), *Sleep and cognition* (pp 159-175). Washington, D.C.: APA.

Wyatt, J.K. & Bootzin, R.R. (1994). Cognitive processing and sleep: Implications for enhancing job performance. *Human Performance*, 7, 119-139.

Campbell, K., Bell, I., and Bastien, C. (1992). Evoked potential measures of information processing during natural sleep. In R.J. Broughton & R.D. Ogilvie (Eds.), *Sleep arousal and Performance*. Birkhauser.

Wilson, M.A., & McNaughton, B.L. (1994). Reactivation of hippocampal ensemble memories during sleep. *Science*, 265, 676-679.

Plihal, W., & Born, J. (1997). Effects of early and late nocturnal sleep on declarative and procedural memory. *Journal of Cognitive Neuroscience*, 9, 534-547.

Wagner, U., Gais, S., Haider, H., Verleger, R., & Born, J. (2004). Sleep inspires insight. *Nature*, 427, 352-355.

Frank, M.G., Issa, N.P., & Stryker, M.P. (2001). Sleep enhances plasticity in the developing visual cortex. *Neuron*, 30, 275-287.