Course description: All individuals are affected by the consequences of sleep disorders. The purpose of this online course is to present background knowledge about the most common disorders, including insomnia, hypersomnia, obstructive sleep apnea, restless legs, circadian rhythm disorders, narcolepsy, and such parasomnias as REM sleep behavior disorder and sleep walking. The course begins with a theoretical discussion of the functions of sleep, its physiology, neurochemistry, and ontogeny. Students are then introduced to the most important disturbances of sleep.

Course Objectives:

(1) To learn about the neurophysiology of sleep and sleep-wake mechanisms
(2) To appreciate the possible theories for the function of sleep
(3) To learn about the adverse consequences of sleep deprivation
(4) To become familiar with the measurement of sleep
(5) To gain appreciation about sleep disorders, their clinical presentation, underlying causes, differential diagnosis and possible therapies.
Introduction to Sleep Disorders

Sleep exerts major effects on most fundamental homeostatic mechanisms. Because sleep occupies a significant component of our life span, and disturbances of sleep affects psychological and physiologic health, knowledge about sleep disturbances is not only essential, but also critical.

Tiger Woods once said that one of the best things about his choice to leave College for the professional golf circuit was that he could now get enough sleep. We have learned that the consequences of pervasive sleep deprivation and undiagnosed sleep disorders are collectively one of our nation's biggest and most serious problems. Falling asleep at the wheel and in other hazardous situations is a leading cause of death and disability. A single sleep disorder, obstructive sleep apnea, is now known to afflict 30 million Americans! Dr. William Dement, one of the founders of the field of sleep medicine, points to a paradox in that our society remains a vast reservoir of ignorance about sleep deprivation and sleep disorders. The benefits of the hard earned knowledge about normal and pathological sleep have not been passed on to the general public and practicing physicians. Millions of people are suffering and thousands are dying each year without ever knowing the true cause of their problems. Dr. Dement went on to state that one of the reasons for this paradox is that teaching about sleep its physiology, the nature and consequences of sleep deprivation, and common sleep disorder symptoms is essentially absent from the undergraduate and graduate curriculum in our colleges and universities. Perhaps the saddest omission of all is that most student drivers learn nothing about the dangers of driving drowsy in their training programs, and an astounding number soon die and kill others because they fall asleep at the wheel. Fifty-five percent of drowsy driving fatalities occur under the age of 25.

Although sleep is critical for our well being, millions of Americans suffer needlessly from disrupted sleep at night. Sleep problems often take the form of difficulties falling or staying asleep, waking early in the morning, loud snoring with frequent breathing pauses, leg jerks during the night or more rare abnormal behaviors at night. Sleep problems can strike at any age and can severely affect physical and psychological health, as well as the ability to perform well at school or work. Fortunately, most sleep disorders respond to some form of medical or psychological treatment.

This introductory course will attempt to bridge the gap between knowledge available about sleep disorders and the quest to learn about sleep disturbances. We will accomplish this through several goals: (1) provide a basic introduction to the study of sleep and an overview of sleep including measurement, regulation, ontogeny,
phylogeny, and physiology; (2) provide a basic introduction to the primary sleep disorders including sleep apnea, insomnia, circadian rhythm disorders and parasomnias. To facilitate the learning process, key chapters, articles, learning modules and PowerPoint presentations will be posted throughout the semester, identifying such important components as epidemiology, clinical presentation, physiology, and treatment.

Each week will begin on Monday and will end on the following Sunday at midnight!

Technology Requirements:

Students must have basic computer skills, including the use of word processing, email and the ability to use internet browsers such as Internet Explorer or Netscape. The completion of Blackboard student orientation is recommended. The midterm and final assignments require that students be proficient in using PowerPoint Microsoft Office or KeyNote.

Required Text:

Understanding Sleep: The Evaluation and Treatment of Sleep Disorders
Suggested Price: $11.66 (Amazon.com)

Edited by Mark R. Pressman, PhD and William C. Orr, PhD
PUBLICATION DATE: August 2000

The reading assignments from the textbook will complement the online lecture material. In addition to this required book, students will be provided with selected articles pertinent to the discussion topic of the week.

Suggested supplementary textbook:
Lectures:
Below is a syllabus and course calendar. The chapters in the parenthesis are referred to in your textbook *Understanding Sleep: The Evaluation and Treatment of Sleep Disorders*.

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic (chapter #)</th>
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<tbody>
<tr>
<td>1</td>
<td>Sleep Physiology (1,2)</td>
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<tr>
<td>2</td>
<td>Sleep Staging and Polysomnography (8, 9)</td>
</tr>
<tr>
<td>3</td>
<td>Introduction to Sleep Disorders (3, Appendix A, B, C)</td>
</tr>
<tr>
<td>4</td>
<td>Overview and Management of Insomnia (6, 16, 17)</td>
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<tr>
<td>5</td>
<td>Sleep Related Breathing Disorder (13)</td>
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<tr>
<td>6</td>
<td>Treatment of Sleep Related Breathing Disorder (14, 15)</td>
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<tr>
<td>7</td>
<td>Hypersomnia of Central Origin and Narcolepsy (7, 10)</td>
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<tr>
<td>8</td>
<td>Circadian Rhythm Sleep Disorders (11, 12)</td>
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<tr>
<td>9</td>
<td>Complex Nocturnal Behaviors: The Parasomnias (22)</td>
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<tr>
<td>10</td>
<td>Miscellaneous Sleep Disorders (18, 19, 20, 21)</td>
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<tr>
<td>11</td>
<td>Sleep Disorders in Special Populations (22, 24)</td>
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<tr>
<td>12</td>
<td>Sleep, aging and Neurodegenerative Disorders (23)</td>
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</tbody>
</table>

Please review the [course assignments](http://uclaextension.blackboard.com) which are posted for the corresponding weeks of instruction in the course shell under the UCLA Extension Blackboard website:

http://uclaextension.blackboard.com

The Course Documents will include key electronic resources for supplementary reading and furthering our knowledge. The electronic resources will be comprised on several key electronic educational resources (books, presentations, video links and sleep educational modules developed by sleep experts through the National Institute of Health, the Sleep Research Society, the American Academy of Sleep Medicine and the National Sleep foundation.)
Students will be required to review reading assignments and participate in an online discussion pertaining to the week’s reading material and key discussion questions posted by the instructor.

**Grading:**
Students are required to turn in **two PowerPoint assignments** based on the topics presented during weeks #1-6 and #7-12. Each slide presentation (using PowerPoint or Keynote version) is worth 40 points. Presentations are expected to focus on any topic presented during the respective weeks and is graded based on content, clarity, organization, use of graphics and pictures to illustrate the teaching points and incorporation of literature to support the data.

These assignments are expected to be completed by Sunday (5 pm, Pacific standard time) of the week in which they are scheduled. Students who are traveling or are unable to submit the material by the deadline are encouraged to submit the assignment a week earlier.

The other 20% of the exam is based on regular participation and contribution to the regularly occurring discussion sessions. To obtain the full 20 point credit, students are expected to participate weekly in discussion boards by posting answers to discussion questions posted weekly by the instructor. Grading will be based on thoughtful responses, detailed and well researched responses.

<table>
<thead>
<tr>
<th>Points</th>
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<tr>
<td>Midterm Assignment</td>
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<td>Final Assignment</td>
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<tr>
<td>Discussion Participation</td>
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<tr>
<td><strong>Total points</strong></td>
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</tbody>
</table>

**Expected letter grade assignments (based on percentage accrued points)**

- 90% and above: A
- 80 -89 %: B
- 67-79 %: C
- 55-66 %: D
- Less than 55 %: F

Student Course Essential Website: You can access your grades or order transcripts on the UCLA Extension Student Website at [www.uclaextension.edu](http://www.uclaextension.edu) and click on MyExtension then Student Course Essentials.

**Instructor:** Alon Avidan MD, MPH
Instructor’s Bibliography

Dr. Avidan is currently Associate Professor of Neurology at UCLA where he serves as Director of the Neurology Residency Program, Associate Director of the Sleep Disorders Program and Director of the Neurology Clinic.

Dr. Avidan has developed expertise in sleep disorders in the older person. His research interests are in the field of geriatrics sleep medicine, insomnia and sleep and fatigue management in residency training. His clinical interests include management of insomnia, sleep disordered breathing, restless legs syndrome, circadian rhythm disorders, and hypersomnia.

Accommodations: If you need any accommodation for a disability, please contact the UCLA Disabled Student Services Office at (310) 825-7851.

Professional Credit: UCLA Extension is a Continuing Professional Education (CPE) accredited provider with the Commission on Dietetic Registration (CDR); registered dietitians (RDs) and dietetic technicians, registered (DTRs) receive 36 continuing professional education units (CPEUs) for completing this program. UCLA Extension is approved by the California Board of Registered Nursing (provider BRN #CEP 11952) to offer this activity for 36 contact hours.

Students who are interested in receiving BRN or RD credit must notify the instructor and the department via EMAIL and you must provide your license number. A certificate will be mailed to the address on file 2 weeks after the end date of the course. To contact the department, please email dhernand@unex.ucla.edu.

Note: Syllabus subject to update by the instructor.