Class Location: 5364 Scott Hall (Physiology Conference Room)
Course Director: Jason H. Mateika Ph.D.
Phone Number: 313-576-4481
E-mail: jmateika@med.wayne.edu

Course Faculty and e-mail:
M. Safwan Badr MD – sbadr@med.wayne.edu
Susmita Chowdhuri MD – schowdh@med.wayne.edu
Don DeGracia PhD – ddegraci@med.wayne.edu
Chris Drake PhD – cdrake1@hfhs.org
Jason Mateika PhD – jmateika@med.wayne.edu
Timothy Roehrs PhD – troehrs1@hfhs.org

Office hours: At a mutually convenient time for student and faculty member.

Course Description: The course is designed for students that have an interest in
1) Basic sleep physiology
2) Sleep disorders
3) The impact of sleep on cognitive and physical performance
4) Dreams

Course Objectives:
1) To obtain a fundamental understanding of sleep physiology
2) To examine the impact that sleep has on various physiological systems (e.g. respiratory,
cardiovascular and endocrine systems).
3) To introduce the application of sleep to a variety of disciplines
4) To offer guidance in critical reading and discussion of the literature.

Course Evaluation:
Part 1 – Attendance and Participation (20 %): Attendance and participation will be graded equally. If you miss a class 1 point per absence will be deducted from your final attendance and participation grade. In addition, it is your responsibility to complete assignments if you are absent from class. There will be no exceptions for missed assignments.

Part 2 – Faculty Assignments (80 %): Each faculty member will provide at least one assignment for students in the class. Students must complete one assignment for each faculty member, for a total of 6 assignments. Faculty members that are teaching more than one class may provide more than one assignment. In this case, students may choose the assignment to complete. All assignments are due two weeks after the material is presented in class. Late assignments will be considered to be missed assignments. You will have until midnight of the due date to get an assignment to the instructor. Any assignments received by an instructor after this time will be considered as missed assignments and a zero will be given. There will be no exceptions.
Academic Dishonesty:
The wide-spread availability of online resources could result in large portions of text being copy and pasted for assignments. Please be aware that such an action is plagiarism. It is acceptable to quote small portions of another author’s writing, as long as each quote is referenced. It is acceptable to read another author and put their ideas in your own words, as long as you cite the author appropriately. However copy and pasting without citation is plagiarism. *Plagiarism will result in an F in the class.* (See the University’s policy on Academic Dishonesty on page 4)

Grading scale for the course is as follows:

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>97-100</td>
<td>A+</td>
</tr>
<tr>
<td>94-96</td>
<td>A</td>
</tr>
<tr>
<td>90-93</td>
<td>A-</td>
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<tr>
<td>87-89</td>
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<td>77-79</td>
<td>C+</td>
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<tr>
<td>74-76</td>
<td>C</td>
</tr>
<tr>
<td>70-73</td>
<td>C-</td>
</tr>
</tbody>
</table>

Schedule

**January 10 – Jason Mateika PhD (Basics of Sleep - Normal Human Sleep)**
- ♠ Course Introduction
- ♠ Normal sleep
- ♠ Behavioral changes at sleep onset
- ♠ Physiological responses to sleep
- ♠ Factors modifying sleep stages

**January 17 – Don DeGracia PhD (Basics of Sleep - Brain mechanisms responsible for sleep and wakefulness)**
- ♠ Brain mechanisms responsible for sleep and wakefulness
- ♠ Origin of NREM and REM sleep
- ♠ Chemical and neuronal mechanisms of sleep

**January 24 - Jason Mateika PhD (Sleep Disorders – Sleep Apnea):**
- ♠ Central and obstructive sleep apnea (mechanisms, consequences and treatment)

**January 31 - Timothy Roehrs PhD (Chronobiology and its associated disorders):**
- ♠ Circadian rhythms
- ♠ Physiological rhythms
- ♠ Environmental influences

**February 7 - Timothy Roehrs PhD (Chronobiology and its associated disorders):**
- ♠ Circadian rhythm and sleep
- ♠ Circadian rhythm alterations in activation, mood and performance efficiency
- ♠ Jet lag
- ♠ Shift work

**February 14 – Chris Drake PhD (Sleep Disorders – Narcolepsy and Insomnia):**
- ♠ Insomnia (mechanisms, consequences and treatment)
♣ Narcolepsy (mechanisms, consequences and treatment)

**February 21 - Safwan Badr MD (Sleep Disorders – Pediatric sleep disorders):**
- Pediatric breathing disorders
- Sleeplessness in the child
- Sleepwalking, confusional arousals and sleep terrors in the child

**February 28 - Safwan Badr MD (Sleep Disorders – Sleep walking and Night terrors):**
- Sleep walking and night terrors (mechanisms, consequences and treatment)

**March 7 - Safwan Badr MD (Gender, Age and Sleep):**
- Sleep quality and hormonal profiles in men and women
- Gender differences in the diagnosis of sleep apnea
- Gender differences in the mechanisms responsible for sleep apnea
- Age and sleep apnea
- Mechanisms responsible for sleep apnea in the young and old adults

**March 14:** Spring Break

**March 21 - Jason Mateika PhD (Physical and mental consequences of sleep fragmentation):**
- Impact of sleep on learning and behavior in adolescents
- Sleep fragmentation and work related injury

**March 28 - Susmita Chowdhuri MD (Menopausal women and sleep):**
- Menopausal women, hot flashes and sleep disturbances

**April 4 – Susmita Chowdhuri MD (Interaction between sleep and exercise):**
- Sleep quality and exercise – Does exercise promote or mitigate sleep disturbances
- Treating sleep disturbances in menopausal women with exercise

**April 11 - Don DeGracia, PhD (Dreaming):**
- The biology of dreaming sleep
- Dreams and their meaning
- Normal and abnormal dreams

**April 18 (Laboratory experience):** Students will be divided into groups. The set-up and recording of a polysomnogram will be demonstrated at a time that is mutually agreed upon between the instructor and each group of students.

**April 29:** Final assignments due.

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**UNIVERSITY POLICIES**

Religious holidays.-- (from the online Academic Calendar): Because of the extraordinary variety of religious affiliations of the University student body and staff, the Academic Calendar makes no provisions for religious holidays. However, it is University policy to respect the faith and religious obligations of the individual. Students with classes or examinations that conflict with their religious observances are expected to notify their instructors well in advance so that mutually agreeable alternatives may be worked out.
Student Disabilities Services -- (edited statement from the SDS web site): If you have a documented disability that requires accommodations, you will need to register with Student Disability Services for coordination of your academic accommodations. The Student Disability Services (SDS) office is located in the Adamany Undergraduate Library. The SDS telephone number is 313-577-1851 or 313-202-4216 (Videophone use only). Once your accommodation is in place, someone can meet with you privately to discuss your special needs. Student Disability Services' mission is to assist the university in creating an accessible community where students with disabilities have an equal opportunity to fully participate in their educational experience at Wayne State University.

Students who are registered with Student Disability Services and who are eligible for alternate testing accommodations such as extended test time and/or a distraction-reduced environment should present the required test permit to the professor at least one week in advance of the exam. Federal law requires that a student registered with SDS is entitled to the reasonable accommodations specified in the student’s accommodation letter, which might include allowing the student to take the final exam on a day different than the rest of the class.

Academic Dishonesty -- Plagiarism and Cheating (edited statement from the DOSO’s web site): Academic misbehavior means any activity that tends to compromise the academic integrity of the institution or subvert the education process. All forms of academic misbehavior are prohibited at Wayne State University, as outlined in the Student Code of Conduct (http://www.doso.wayne.edu/studentconduct- services.html). Students who commit or assist in committing dishonest acts are subject to downgrading (to a failing grade for the test, paper, or other course-related activity in question, or for the entire course) and/or additional sanctions as described in the Student Code of Conduct.

• Cheating: Intentionally using or attempting to use, or intentionally providing or attempting to provide, unauthorized materials, information or assistance in any academic exercise. Examples include: (a) copying from another student’s test paper; (b) allowing another student to copy from a test paper; (c) using unauthorized material such as a "cheat sheet" during an exam.

• Fabrication: Intentional and unauthorized falsification of any information or citation. Examples include: (a) citation of information not taken from the source indicated; (b) listing sources in a bibliography not used in a research paper.

• Plagiarism: To take and use another’s words or ideas as one’s own. Examples include: (a) failure to use appropriate referencing when using the words or ideas of other persons; (b) altering the language, paraphrasing, omitting, rearranging, or forming new combinations of words in an attempt to make the thoughts of another appear as your own.

• Other forms of academic misbehavior include, but are not limited to: (a) unauthorized use of resources, or any attempt to limit another student’s access to educational resources, or any attempt to alter equipment so as to lead to an incorrect answer for subsequent users; (b) enlisting the assistance of a substitute in the taking of examinations; (c) violating course rules as defined in the course syllabus or other written information provided to the student; (d) selling, buying or stealing all or part of an un-administered test or answers to the test; (e) changing or altering a grade on a test or other academic grade records.

Course Drops and Withdrawals -- In the first two weeks of the (full) term, students can drop this class and receive 100% tuition and course fee cancellation. After the end of the second week there is no tuition or fee cancellation. Students who wish to withdraw from the class can initiate a
withdrawal request on Pipeline. You will receive a transcript notation of WP (passing), WF (failing), or WN (no graded work) at the time of withdrawal. No withdrawals can be initiated after the end of the tenth week*. Students enrolled in the 10th week and beyond will receive a grade. Because withdrawing from courses may have negative academic and financial consequences, students considering course withdrawal should make sure they fully understand all the consequences before taking this step. More information on this can be found at: http://reg.wayne.edu/pdf-policies/students.pdf

* The last day to request to withdraw from this course is **Sunday, March 26, 2017**. Beyond this date, no requests to withdraw can be considered.

**Student Services**

* The Academic Success Center (1600 Undergraduate Library) assists students with content in select courses and in strengthening study skills. Visit www.success.wayne.edu for schedules and information on study skills workshops, tutoring and supplemental instruction (primarily in 1000 and 2000 level courses).

* The Writing Center is located on the 2nd floor of the Undergraduate Library and provides individual tutoring consultations free of charge. Visit http://clasweb.clas.wayne.edu/writing to obtain information on tutors, appointments, and the type of help they can provide.

* Library research assistance -- Working on a research assignment, paper or project? Trying to figure out how to collect, organize and cite your sources? Wayne State librarians provide on-campus or online personalized help. Contact them at http://library.wayne.edu/consult

* Class recordings: Students need prior written permission from the instructor before recording any portion of this class. If permission is granted, the audio and/or video recording is to be used only for the student’s personal instructional use. Such recordings are not intended for a wider public audience, such as postings to the internet or sharing with others. Students registered with Student Disabilities Services (SDS) who wish to record class materials must present their specific accommodation to the instructor, who will subsequently comply with the request unless there is some specific reason why s/he cannot, such as discussion of confidential or protected information.