

## **SYLLABUS: CLINICAL NEUROSCIENCE BMS6706C, 2007**

### **General Course Information**

This syllabus is intended to be a current guide to the activities and grading of this course, but it is not written in stone. The content of the syllabus can change during the course and will be reflected on the Blackboard site. Please check you Blackboard announcements for any changes in the course syllabus or schedule.

**The following can be found on Blackboard:** Course syllabus, calendar, PowerPoint presentations, case histories, helpful study guides and slides, and general announcements.

**Goals.** This course is designed to provide students with a fundamental understanding of clinical neuroscience. Students who complete this course will understand the normal anatomy and physiology of the nervous system and will recognize important symptoms and signs associated with neurological disease. In addition, students will understand the functional and clinical significance of the three-dimensional organization of anatomical structures, and the interconnections and spatial relationships that bind structures together in the nervous system. Mastery of these concepts will enable students to localize lesions in the central nervous system and predict the neurological deficits associated with lesions. Our goal is to achieve long-term acquisition of neuroscience concepts such that students perform well as clinicians long after the course has been completed.

### **Broad Course objectives**

#### **Knowledge:**

1. Develop a three-dimensional image of the brain and spinal cord.
2. Understand the relationship between lesion location and functional deficits.
3. Acquire a working knowledge of the functional anatomy of neuronal pathways
4. Acquire the basic concepts necessary for further study in other courses and clinical situations, especially those involving neurology.
5. Develop an understanding of neurological changes associated with aging, such as Alzheimer's disease and other dementias.
6. Develop an understanding of how neuroscience information is used by clinicians in medical diagnosis.
8. Understand the cell biology of neurons, muscle cells and neurosecretory cells as well as the biophysical and physical chemical principles that underlie their function.

9. Understand the physiology and biochemistry of neurotransmission and other types of inter- and intra-cellular communication, including short and long-term modification.
10. Understand the neurophysiological mechanisms controlling movement, sensation and overall integration of visceral function.
11. Understand current physiological concepts related to higher brain functions such as cortical integration, learning and memory.
12. Understand the relationships and interdependency of the nervous system and the endocrine system.

***Skills:***

1. Demonstrate a logical problem-solving approach to clinical neurological cases.
2. Demonstrate familiarity using informatics to find information relevant to neuroscience.
3. Demonstrate ability to apply neuroanatomical knowledge to radiological images.

***Attitudes:***

1. Demonstrate professional behavior in interacting with each other, with guest patients, and with faculty.

**Office Hours: 10-11 AM daily or by appointment:**

**Charles Ouimet, Ph.D., 644-2271, [charles.ouimet@med.fsu.edu](mailto:charles.ouimet@med.fsu.edu), room 2300H**

**Academic Honor System:**

"The Academic Honor System of The Florida State University is based on the premise that each student has the responsibility to: 1) Uphold the highest standards of academic integrity in the student's own work, 2) Refuse to tolerate violations of academic integrity in the academic community, and 3) Foster a high sense of integrity and social responsibility on the part of the University community." Please note that violations of this Academic Honor System will not be tolerated in this class. Specifically, incidents of plagiarism of any type or referring to any unauthorized material during examinations will be rigorously pursued by these instructors. Before submitting any work for this class, please read the Academic Honor System in its entirety (as found in the FSU General Bulletin and in the FSU Student Handbook) and ask the instructors to clarify any of its expectations that you do not understand.

**ADA Statement:**

Florida State University provides high-quality services to students with disabilities, and we encourage you to take advantage of them. Students with disabilities needing academic accommodations should: 1) register with and provide documentation to the Student Disability Resource Center in Kellum Hall (644-9566), and 2) bring a letter to the instructor from the SDRC indicating that you need academic accommodations. Please do this as soon as possible, preferably within the first week of class.

**Course components:**

Neuroscience laboratory and clinical discussions. The laboratory sessions are designed for active "adult" learning. Students will work as independent groups in the lab where they will be given a clinical problem and asked to photograph the site(s) involved with pathology. These photos, plus medical images or illustrations that extend and clarify the photos, will be placed in a PowerPoint presentation which will be given to the class and stored in a blackboard portfolio that will be graded. Points will be given for completeness of differentials, clearly demonstrated and logical clinical reasoning, correctly labeled photographs (at least 5 of these), and incorporation of material from the internet. Points will be lost when the differential is sketchy, clinical thinking is not in the forefront, photographs are mis-labeled or too few in number, or information from the internet is lacking. It is considered to be especially poor form to jump to a diagnosis without clearly demonstrated clinical reasoning and a solid differential (EVEN IF THE DIAGNOSIS IS CORRECT.)

Lectures. A lecture format that invites discussion and student participation will be used. Students should come to class with a good familiarity of the lecture material, facilitating discussion and active learning during lectures.

Team-based learning sessions. In the main classroom, students will take a "readiness quiz" on a reading assignment and then break up into small groups. The students will then re-take the same quiz, but this time they will agree on the answers as groups. The groups are then presented with a clinical case to analyze and the group answers a written quiz that tests their progress in understanding the material. This is followed by a wrap-up session during which misconceptions are dispelled and valid concepts reinforced.

Peer evaluation. At the end of the course, students will evaluate the other group members anonymously and. These evaluations will be shared with the students and kept on file

should information be requested when professionalism is questioned .

**Assessment.** Student performance on all activities will result in an accumulation of points which will determine the student's status for the course and grades will be presented as A ,B+ , B, C+, C, D+, D, or failure. There are five major cumulative exams and each uses "board-type" questions the emphasize problem solving rather than wrote memory. Four of the exams, counting for 70% of the final grade, cover material presented lecture, small groups, labs, and clinical demonstrations. The first 3 exams will count for 15% each and the final will count for 25%. A "board" subject exam will be given at the end of the course and this exam will count for 10 percent of the grade. With the exception of the subject exam, students will not be graded on a curve. Thus, there is no reason for students to feel competitive with each other. On the contrary, higher grades are achieved when students work cooperatively. All exams will be graded according to criterion teaching methods in which exam questions test the students' acquisition of specific ideas (criteria.)

Team-based learning exercises will count for 10% of the final grade. Laboratory portfolios will count for the remaining 10% of the grade. Students receiving peer evaluations consistent worth poor participation will loose points in either or both of these two categories.

Grades will reflect the proportion of course objectives that have been mastered and the following scale will be used:

90 and over = A  
85-89 = B+  
80-84 = B  
75-79 = C+  
70-74 = C  
65-69 = D+  
below 65 = failing grade

## **FSU COM ATTENDANCE POLICY**

### **COM Philosophy**

#### **We believe that:**

Professionalism is a major component of our medical curriculum. We believe students should conduct themselves appropriately in the various educational activities of the curriculum. This

conduct includes coming to educational activities on-time, using the laptop computers only for course work during the educational activity, and not disrupting the class if late. The faculty should also demonstrate professionalism, by starting and ending all scheduled educational activities on time and providing a course schedule with clearly explained course policies in the course syllabus. Any changes in the schedule should be given to the students in a timely manner.

Students will be accountable and personally responsible for attending all educational activities (small groups, labs, clinical experiences, examinations, lectures, computer sessions, etc.).

Unexcused absences reflect negatively on the goals and objectives of the medical curriculum and demonstrate unprofessional behavior by the respective student.

We owe it to our state legislature and the citizens of the State of Florida to provide a quality educational program that meets the needs of our students in preparing them for the M.D. degree.

### **Attendance Policy**

Students are expected to attend all scheduled activities. Students are expected to be on time. Being on time is defined as being *ready to start* at the assigned time. If a student has an emergency that prevents her/him from attending a scheduled activity, s/he is to call and notify the Office of Student Affairs (Year 1/2) or the Regional Campus Dean (Year 3/4) and request that they inform the supervisors/professors/clerkship faculty/education director for that activity. If at all possible, the student should also call and at a minimum, leave a message with one of the course/clerkship directors. *It is important that students realize that their absence or tardiness negatively impacts a number of other people.* Attendance, including tardiness, is part of the student's evaluation for professionalism. Negative evaluations may result in decreased grades and in severe cases, referral to the Student Evaluation and Promotion Committee.

### **Procedure for Notification of Absence**

#### **Year 1/2**

If the student knows in advance of an upcoming legitimate absence, the "Advance Notification of Absence from Educational Activity(ies)" form should be completed with signatures from the student, the Assistant Dean for Student Affairs, the course faculty member and the Course Director. The form will be filed

in the Office of Student Affairs. The implications for the absence (e.g., remediation, course grade adjustment, make-up exam, etc.) will be given to the student by the course director and final decisions regarding these actions shall rest with the course director.

If the absence occurs due to an unforeseen emergency, the student should contact the course director and the Assistant Dean for Student Affairs immediately to report the absence including the reason for the absence. The implications for the absence (e.g., remediation, course grade adjustment, make-up exam, etc.) will be given to the student by the course director and final decisions regarding these actions shall rest with the course director.

#### **Year 3/4**

If the student knows in advance of an upcoming legitimate absence, the "Advance Notification of Absence from Educational Activity(ies) form should be completed, signed by the student and given to the regional campus dean. The Regional Campus Dean will forward the request to the Education Director for the discipline, who after consultation with the Regional Campus Dean and the Clerkship Director, will make the final decision regarding the student's request and give the student the implications for the absence (e.g., remediation, course grade adjustment, make-up exam, etc.). Final decisions regarding implications for the student's grade shall rest with the education director. The clerkship director will notify the faculty member of the decision. The form will be filed in the Office of Student Affairs.

If the absence occurs due to an unforeseen emergency, the student should contact the clerkship director and the Regional Campus Dean immediately to report the absence including the reason for the absence. The Regional Campus Dean will notify the Education Director for the discipline, who after consultation with the clerkship director and regional campus dean will make the final decision regarding implications of the student's absence. The implications for the absence (e.g., remediation, course grade adjustment, make-up exam, etc.) will be given to the student by the education director. Final decisions regarding implications for the student's grade shall rest with the education director. The clerkship director will notify the faculty member of the decision. The form will be filed in the Office of Student Affairs.

## **Remediation Policy for Absences from Examinations, Quizzes, Small Group Sessions, Laboratory Sessions, Clinical Learning Center Sessions, Preceptor visits, and Clerkship Call**

The remediation policies for absences from examinations, quizzes, small group sessions, laboratory sessions and clerkship call are:

1. **POLICY ON MISSED EXAMINATIONS:** Students are required to take major in-term and final examinations. According to the curriculum committee a student can only be excused from an examination by a course/education director decision based on the personal situation of the student. The course/education director will determine the time of the exam make-up session. Also, according to the curriculum committee decision and the existence of the FSU-COM honor code, the student will be given the same examination given to the other students. Unexcused absence from an exam will result in a grade of zero on that exam.
2. **POLICY ON MISSED QUIZZES:** Students are required to take scheduled quizzes in the courses. A student can be excused from a quiz **only** by a course director decision based on the personal situation of the student. The student must make arrangements with the course/education director to make up a missed quiz. Also, according to the curriculum committee decision and the existence of the FSU-COM honor code, the student will be given the same quiz given to the other students. Unexcused absence from a quiz will result in a grade of zero on that quiz.
3. **POLICY ON MISSED SMALL GROUP SESSIONS, LABORATORY SESSIONS, CLINICAL LEARNING CENTER SESSIONS, PRECEPTOR VISITS, AND CLERKSHIP CALL:** The student **should** contact the course director, small group leader or education director for instructions on remediation of the missed session and material covered. Unexcused absence from any of these activities would be regarded as serious and result in a 5% debit on the next major exam.

## **Remediation Policy for Students Who Fail a Course**

Remediation of courses/clerkships will be planned and implemented by a combined decision of the Evaluation and Promotion Committee in collaboration with the course/education director.

## **Un-excused Absences**

It will be the responsibility of the course/education directors to clearly state in their respective course/clerkship syllabi the implications for having an un-excused absence from a scheduled educational or examination activity in a course or clerkship.

**Students with disabilities (ADA Statement)**

Students with disabilities needing academic accommodation should:

1. Register with and provide documentation to the Student Disability Resource Center (SDRC).
2. Bring a letter to the instructor from the SDRC indicating that you need academic accommodations. This should be done within the first week of class. Specific arrangements should be settled with the instructor 5 working days prior to each exam for which accommodations are being requested.



Advance Notification of Absence from Educational Activity(ies)

Student's Name: \_\_\_\_\_

Date of request: \_\_\_\_\_

Name of Course or Clerkship Rotation:  
\_\_\_\_\_

Faculty Name(s): \_\_\_\_\_

Course/Clerkship Director: \_\_\_\_\_

Date(s) of Requested Absence: From \_\_\_\_\_ to \_\_\_\_\_

Classes/Activities that will be missed:

	Date	Time
_____ Classroom Lecture	_____	_____
_____ Small Group	_____	_____
_____ Laboratory session	_____	_____
_____ CLC	_____	_____
_____ Preceptor	_____	_____
_____ Clerkship time	_____	_____
_____ Clerkship Call	_____	_____

Reason for Absence:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Student's Signature/Date  
Affairs/Date

\_\_\_\_\_  
Associate Dean for Student

\_\_\_\_\_  
Faculty's Signature/Date  
Director/Date

\_\_\_\_\_  
Course/Clerkship

Form Filed in Student Affairs Office by:

Date Filed

\_\_\_\_\_  
Printed Name  
  
Signature

\_\_\_\_\_  
Date

**Required textbooks:**

1. The Human Brain, 5<sup>th</sup> (or newest) edition, Nolte, ISBN 0-323-01320-1.
2. Neuroanatomy, an atlas of structures, sections and systems, 4<sup>th</sup> (or latest) edition, Duane Haines, ISBN 0-683-03817-6
3. Physiology, L. Costanzo, 3<sup>rd</sup> edition.
4. Neuroanatomy made ridiculously simple, S. Goldman.

Supplementary Texts:

Neuroanatomy Through Clinical Cases, H. Blumenfeld, 2002 or latest edition, Sinauer Associates, Inc., ISBN 0-87893-060-4 **This text has great case histories.**

Nicholls, J.G. & Martin, A.R., Wallace, B.G. "From Neuron to Brain", 3rd Ed. Sinauer Assoc.Inc. 1992.

Cell Biology: Alberts, B., Bray,D., Lewis,J., Raff, M., Roberts,K. and Watson, J.D.,

"Molecular Biology of the Cell" 4rd Edition. Garland 1999

Basic Clinical Neuroanatomy, Young and Young.

Kandel ER.; Schwartz JH.; Jessel T. "Principles of Neural Science", 4th Ed. McGraw-Hill 2000.

Squire, L.R. "Fundamental

Neuroscience" Academic Press 1998. Good for reference.

**Useful Web sites:**

<http://www.medlina.com/neuroanatomy.htm> General neurology web sites

<http://www.vh.org/adult/provider/anatomy/BrainAnatomy/BrainAnatomy.html> Brain atlases

<http://www.med.harvard.edu/AANLIB/home.html> The Harvard brain atlas