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COURSE NUMBER  GMS6705

CREDIT HOURS 4 credit hours

COURSE DESCRIPTION

This semester online course is organized into thirteen modules, each of which covers a key human neuroanatomical system. The primary focus of this course is mastery of human neuroanatomy and understanding how the various structures in the brain are connected to form functional neural systems. Beginning with Module 3 and moving forward you will work through a new Focus Case Study that will be associated with each module. Each Focus Case Study describes a patient exhibiting symptoms characteristic of disruption of the neural system being studied that week. Over the course of the week, you will “solve” the multi-assignment case study using the information presented in the module and in previous modules. These case studies have been designed to help you master the neuroanatomy and functions of the primary neural system under study. At the end of this course you will not only have a working knowledge of human neuroanatomy, but you will also be able to use this knowledge to explain how disruption of brain structure leads to changes in human behavior and cognition.
COURSE GOALS / LEARNING OUTCOMES
Functional Human Neuroanatomy is a complex but rewarding field of study. The driving force behind studies of the human brain continues to be our desire to explain normal human behavior and cognition and the changes in behavior and cognition that often result from injury and disease. In this course we will cover the anatomy and functions of key neural systems including motor and somatosensory systems, the cranial nerves, the visual system, the auditory and vestibular systems, the basal ganglia and cerebellum, the hypothalamus, the limbic system, and higher cortical systems.

At the end of this course, you will not only have a working knowledge of human neuroanatomy, but you will also be able to use this knowledge to explain how disruption of brain structure leads to changes in human behavior and cognition.

COURSE FORMAT

The Syllabus
We call the current document the course handbook and this document contains most of the information that is normally found in a typical syllabus. The reason this document is not officially a “syllabus”, is, that there is no precise schedule herein. The precise class schedule is found in Canvas and is dynamically updated automatically if a change in the schedule is instituted. You can find the syllabus as shown below.

Course Modules
This course is divided into 13 Modules. Most Modules will be completed in one week – longer modules are covered in two weeks. Each Module covers a specific neural system and is broken down into 3-7 Units that contain the core material. You must complete the 13 Modules sequentially, and each Module will be considered complete when you have submitted the Case Study assignments, and completed the Module test for that module. The flow of the class is strictly controlled. If you do not complete the Case studies or
Module test on time, you will be automatically locked out of the Identification tests, Case Studies, and Module test for the following module which required that item as a prerequisite. However, you will be able to see all the module material and take the self-check quizzes.

Focus Case Studies
In addition to the units that contain the core material, beginning in Module 3, each Module contains a Focus Case Study that you will “solve” over the course of the week using the information presented in the Module under study and in the previous Modules. Each Case Study contains 2-5 assignments that you will be required to complete sequentially and submit prior to taking the Module test that accompany each Module. Each assignment is submitted through a text entry box that allows rich formatting and insertion of media and images. This feature allows you to support your answers with drawings you create (but drawings and media are NOT required for perfect performance).

Units
Each Module is broken down into 3-7 Units that have been designed to improve your ability to access and understand the material presented on the neural system covered in each module. Each Unit contains a reading assignment, a video lecture(s) in VoiceThread format, and a self-check quiz that will allow you to determine how well you have understood the material presented in the unit. Each VoiceThread lecture is ~15 min in duration and can easily be viewed slide-by-slide allowing you to view the lectures on your schedule.

Weighting of Quizzes and Assignments
The self-check quizzes will constitute 15% of your final grade and the module test will constitute 50% of your final grade. The remaining 35% of the final grade will be derived from the Case Study assignments you complete for each module. The content and quality of the Case Study assignments will be evaluated by both instructors.

<table>
<thead>
<tr>
<th>Assignment Type</th>
<th>Percentage Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit Self-check quizzes</td>
<td>15% Grade</td>
</tr>
<tr>
<td>Module test</td>
<td>50% Grade</td>
</tr>
<tr>
<td>Case Study Assignments</td>
<td>35% Grade</td>
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</tbody>
</table>

TARGET AUDIENCE
This semester course has been specifically designed for students enrolled in the UF Biomedical Neuroscience Certificate Program. This course is designed to provide a working understanding of Functional Human Neuroanatomy. Graduate students attending UF in programs outside of the IDP Neuroscience Program and interested
postgraduate and advanced undergraduate students are encouraged to inquire about registration.

PREREQUISITES
If you are an Online Certificate student or an Online Master’s student, GMS 6007 is an absolute prerequisite for taking this course. If you are enrolled somehow without having taken GMS 6007 course, please drop the course immediately.

COURSE DIRECTOR AND INSTRUCTOR
Ron Mandel, Ph.D.
Professor of Neuroscience
Assistant Director of the Online Biomedical Neuroscience Online Programs

Email – see directions below

GENERAL COURSE SCHEDULE
This is a semester course that is offered during the spring semester each year. One course module will be completed each week. In addition to reading assignments, quizzes and tests, students will complete one Focus Case Study each week.

LEARNING RESOURCES

- The following two textbooks are REQUIRED for this course:
  - Neuroanatomy through Clinical Cases, 2nd Edition. Author: Hal Blumenfeld. Sinauer Associates, Inc. 2010. ISBN 978-0-87893-058-6 I recommend you buy the hardcopy from a friend or a vendor like Amazon because I do not like the eBook interface. However, if you are interested in the eBook the link is (if you have any trouble obtaining this book please notify me immediately): https://redshelf.com/book/673333/neuroanatomy-through-clinical-cases-673333-9781605353975-hal-blumenfeld
The following book is strongly recommended:

  
  https://global.oup.com/academic/product/sylvius-4-online-9780878939695?cc=us&lang=en

There are images taken from this online atlas in some of the VoiceThreads early in the course, so this resource is recommended but you should be able to complete the course without using this atlas. There are numerous other free online atlases that could also replace this resource.

- We will also be providing you with specific relevant Chapters from Medical Neuroscience Authors: Stephen E. Nadeau, Tanya S. Ferguson, Edward Valentstein, Charles J. Vierk, Jeffrey C. Petruska, Wolfgang J. Streit and Louis A. Ritz, Saundars 2004, ISBN 0-7216-0249-5 (out of print) as supplementary reading.

**NOTE:** We suggest using the eBook version of the Neuroanatomy through Clinical Cases. Both of these textbooks can be purchased through the following website:

https://redshelf.com/book/673333/neuroanatomy-through-clinical-cases-673333-9781605353975-hal-blumenfeld. Purchase of the printed version of Neuroanatomy through Clinical Cases includes a 2-year subscription to the interactive online eBook.

- All VoiceThread lectures are accessed directly through the Canvas course website. VoiceThread is an asynchronous interaction platform that allows you to post questions about the material directly within the lectures using the text, audio, or video + audio commenting feature of VoiceThread. VoiceThread is easy to use and you will become familiar with it as you work through the Start Module of the course.

- Each unit contains a self-check online quiz that is designed to reinforce the materials covered in each unit. These quizzes contain questions that will serve as examples of those comprising the module test.

- Discussion boards for each Module are available for posting questions about the course materials covered in that Module.

- Online or face-to-face meetings with instructors are available upon request.
SELF-CHECK QUIZZES, MODULE TEST, FOCUS CASE STUDIES, AND GRADING

For each of the 13 modules, students will complete 3-7 self-check unit quizzes and a module test (identification, fact test). For modules 3-13, you will need to display competency (minimum 80% correct) in the identification of neuroanatomical structures in order to progress to the module fact test. For modules 3-13 students will also complete a multi-part case study. Most Modules are covered in one week. All self-check quizzes for the modules covered in one week are due on the Thursday of that week at 11:59 pm. The identification test for each Module is due at 11:59pm on Friday. Starting in module 3, you may have to take this identification test multiple times to achieve 80% competency. Starting in module 3, there is a maximum of 5 tries available to achieve 80% in the identification test. Therefore, it is important to plan your time accordingly. After each attempt, you will see which questions that you missed. The other Module test is due on the following Sunday at 11:59 pm. The case studies must be completed before you will be able to take the Module test. If you do not achieve 80% identification competency by Friday at 11:59 pm, you will not be able to take the module test. Therefore, you will have to contact the course director to re-open the identification test for you. For each attempt above 5 that it takes you to achieve 80%, you will lose 1 point from that individual ID test on your final grade. Note: the anatomy portion of this course is extremely important. It is difficult to do well on the clinical portions of the module test if you do not understand the anatomy. Therefore, we have instituted the 80% requirement for 2 reasons, 1) so you learn the anatomy better and 2) potentially poor anatomy performance could negatively affect your final grade and threaten your standing in the program.

SELF-CHECK QUIZZES

Each unit is accompanied by a self-check quiz that is designed to allow you to determine how well you know the material in that unit. These quizzes will be taken under the same conditions as the identification and module test – that is they will be taken using LockDown Browser, they will be timed, and once a question is answered and submitted, you will not be able to return to that question. You must answer each question to view the next question. You will be given 1 min to answer each question on average.

You must complete all self-check quizzes for a specific Module by 11:59 pm on the Thursday before the Module test is due. The correct answers for these quizzes will be available to you from 12:01 am on Friday until 12:01 am on Saturday. If you complete the quiz early (Mon-Thurs), you may individually request feedback on the quiz from the instructors.

The reasons for completing these quizzes by this deadline are:

1. You will not be able to access the quizzes after 11:59 on Thursday and will receive zero points for quizzes not completed by the deadline.
2. Taking these low stakes quizzes by 11:59 on Thursday will enable you to determine what materials you don't understand and will give you an opportunity to obtain help with this material on Friday-Saturday before taking the module test on Sunday. The instructor will have limited availability for answering questions on Sunday.

3. The correct answers for the self-check quizzes taken each week will be made available to you automatically. You must have submitted the quiz to see the answers.

MODULE TEST (using LockDown Browser)

The Friday quiz will consist of neuroanatomical identification questions that are mainly multiple choice but some do contain fill-in-the-blank. This module test is due at 11:59pm on every Friday starting with module 3. In the ID module test, the questions will be randomized and will be presented one-at-a-time. Once a question is answered and submitted, you will not be able to return to that question. You must answer each question to view the next question. You will be given an average of 20 sec to answer each question. You must achieve 80% correct answers on this module test to be allowed to take the following a module test described below. You may take the test up to 5 times as you need and the number of attempts are not considered in your grade unless you need more than 5 tries. **Therefore, it is imperative that you leave yourself enough time on Friday to take this test multiple times or you may be locked out of the rest of the module test. This then locks you out of the following module test for the rest of the class (this is a Canvas feature that cannot be defeated by the Instructor). See below for excused absence policy.**

The second module quiz will consist of T/F, multiple choice, matching, fill-in-the-blank, and multiple answer questions. All tests will be timed and taken using LockDown Browser.

In the second quiz, the questions will be randomized and will be presented one-at-a-time. Once a question is answered and submitted, you will not be able to return to that question. You must answer each question to view the next question. You will be given an average of 1 min to answer each question on average. Also, in some of these quizzes, there are multiple answer choice questions. Canvas grades these multiple answer questions as follows: Canvas gives proportional points for each correct selection but removes points for each incorrect answer (there are not negative total points for an individual question). For example, if the question is worth 3 points and there are 6 correct choices, and a student answers 4 correct choices and 2 incorrect choices, the student receives +2 points for the correct choices but -1 for the incorrect choices. Therefore, even though 4 choices were correct, the student only receives 1 point total. This is a feature of Canvas and cannot be changed. **Therefore, on multiple answer choice questions, it is best not to guess.**
We highly recommend that you take the online tests during UF Help Desk hours whenever possible so that you can obtain assistance if needed. Moreover, remember that the Canvas server does not have unlimited bandwidth. Therefore, if you wait until 11pm on Sunday night to begin your assignments, many other people around the UF campus are doing the same thing. This stresses the server on our end which may slow loading of test pictures and take away from your time. Taking assessments at the last minute also does not allow for unexpected problems that may occur.

**Importantly**, the time limit for completing the exam starts when you start the exam. *For example, if you begin a 40 min exam 20 minutes before it is due, you will be given only 20 min to complete the exam because it automatically submits your exam when it is due.*
FOCUS CASE STUDIES
Case study assignments accompany modules 3-13. They consist of 2-5 assignments, each of which must be completed and submitted before the next assignment is the study is available to you. You must complete and submit the case study assignments for each module before you will be allowed to take the module test.

Assignments, quizzes and tests will not be accepted late.
As a rule, unless you have a medical excuse or a confirmed family emergency with appropriate documentation, late assignments, quizzes, and tests will not be accepted. We recognize that personal circumstances arise that may interfere with your ability to meet a deadline. If this occurs, please let us know as soon as you know. We will not be receptive to retrospective requests for deadline extensions. Your emails will be responded to within 24 business hours (typically sooner).

If you encounter computer technical difficulties, be sure to include a UF helpdesk ticket number in your request for a deadline extension if you plan to request one. The extension request MUST be submitted within 24 hours of the technical difficulty.

Grading scale
A letter grade will be given at the end of the course that will reflect the weighted percentages of the points you have earned.

If the class average reaches 85% or above the following scale for letter grades will apply:

93-100% = A
90-92.9% = A-
87-89.9% = B+
83-86.9% = B
80-82.9% = B-
77-79.9% = C+
73-76.9% = C
70-72.9% = C-
67-69.9% = D+
63-66.9% = D
<63% =E

If the class average is < 85% everyone’s score will be scaled to a class average of 85% and then the above scale will apply. There is no rounding of curved grades.

GRADING POLICY
There is a lot of material covered in this course. Thus, it is VERY IMPORTANT that you set aside sufficient time each week to complete the required work. Students will be expected to complete all requirements for one module each week. There will be no deadline extensions for completion of a module unless granted by the course directors.
prior to the scheduled completion date. Failure to submit a module assignment, self-
check quiz, or module test by the course deadlines will be recorded as a zero.

REQUIRED TECHNOLOGY

- Laptop or desktop computer equipped with microphone and video camera. A microphone and video camera will be used for video conferencing with instructors if you choose to do this. You must have stable internet of > 50 Mbps at your disposal.
  - There is a Canvas app that can be used to access the course using your portable devices. The app is not as good as laptop or desktop computers.
  - There are VoiceThread apps that are available for iOS and Android devices that can be used to view and post comments on VTs. While these portable devices are excellent for watching lectures and asking questions, we strongly recommend that you use laptop or desktop computers when working on this course. (While I often use the iOS VT app myself, I have found it to be terribly unreliable. VT often fixes issues rapidly and please feel free to contact their support which is very responsive.)

- Installation of LockDown Browser – installation instructions and a practice quiz are under Task 3 of Unit 2 in the Start Module. Prior to starting LockDown Browser, quit all other programs on your computer.

- High speed, broad band internet connection such as DSL or cable. When using LockDown Browser your computer should be directly connected to the internet rather than accessing using WiFi. A broadband Internet connection is strongly recommended. Slower connections should still be able to access e-Learning, but will take longer to load.
  - SPECIAL NOTE: Some users with satellite Internet service may find their online courses do not load quickly or consistently due to satellite network design issues.

- It is highly recommended that you work with Canvas and VT using either the Firefox or Chrome Browsers.

- For specific questions about browser compatibilities and general questions about e-learning at UF please go to https://wiki.helpdesk.ufl.edu/FAQs/E-Learning.

Software Use

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken
as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

**COURSE CONDUCT (What is expected of you)**

In all course related activities, students are expected to respect one another and use proper language. Students need to be aware that online learning can present significant challenges, particularly to individuals who are not 'self-starters' or those who do not possess good time management skills.

The online classroom is available to you 24 hours a day. Unlike traditional instructional settings in which each student gets the same class, the online setting means that every student gets a different class, the class of his or her choosing. In theory, this type of instruction should be more adaptable to a variety of learning styles. The reality is, however, that some students seem unwilling (we believe all are able) to create their own virtual classroom. This results in procrastination and low quality performance. Recognizing that everyone learns differently, it is impractical to prescribe a 'best way' to approach this course.

You are expected to adhere to the class calendar. If you have a calendar app that you prefer to use, it is recommended that you put the due dates in your app as reminders. The assignments, quizzes and tests associated with the Modules are due on the days and times stipulated on the syllabus and in the Modules section accessed through the Modules menu button in the left-hand menu. While class interaction and group study are encouraged (it is a very effective way to learn in this course), there are no group projects and all assignments should be prepared and completed individually.

**ACADEMIC HONESTY**

As a result of completing the registration form at the University of Florida, every student has signed the following statement: "I understand that the University of Florida expects its students to be honest in all their academic work. I agree to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University."

We fully support the intent of the above statement and will not tolerate academic dishonesty.

All students enrolled in GMS 6705 are expected to follow the University of Florida Honor Code (excerpt above). The full text can be found at: [http://regulations.ufl.edu/chapter4/4041-2008.pdf](http://regulations.ufl.edu/chapter4/4041-2008.pdf)

Student guidelines for ethical behavior can be found at: [http://www.registrar.ufl.edu/catalog/policies/students.html](http://www.registrar.ufl.edu/catalog/policies/students.html).
Additional Conduct Policy for this online course **PLEASE READ THIS SECTION CAREFULLY**

It is strictly forbidden to use a second device such as a cellphone camera to take images of assessments. A first violation of this rule will result in the student receiving a zero for that assessment. A second violation of this rule will result in the student failing the course and this violation being reported to the University. This rule applies across the board and even to taking a screenshot of a completed assignment in order to send to the instructor a dispute about a question. To avoid the need to take screenshots, you can use the comment feature within the test while viewing your results on the question in detail or detailing the assessment title, question number, and issue at hand in a separate email. Again, this policy is absolute. There are no exceptions.

**Attendance and Make-up Policy**

This is an asynchronous 100% online course so attendance is never required. However, as indicated above, various assessments have hard deadlines. In order to make up an assessment, you must have an excused absence. In general, we want all our students to succeed and are willing to allow wide latitude regarding excused absences. However, in the spirit of fairness to all classmates, we must have some reasonable form of documentation. Pre-clearance of an absence with the approval of the instructor is the best way to deal with obtaining an excused absence. If you have an excused absence, extensions will be granted.

*Potential excused absences:*

- Medical emergencies require documentation.
- Family emergencies require some sort of documentation.
- Intervention of work or military deployment: We extremely value our students who also have careers, therefore, sometimes the students’ career can intervene. In this case, it is critical that prior approval for an extension be obtained from the instructor with some form of documentation. Most times, finishing assignments well prior to their deadline ameliorates this type of problem.
- Internet outages: internet outages in your town or neighborhood can be an excused absence. However, a copy of a chat with your ISP or some other strict form of documentation must be provided. Again, finishing assignments early reduces the chances of internet outages affecting your ability to submit assignments.
- Power outages: severe storms occur especially in the spring. Paying attention to weather reports indicating potential severe storms should allow you to plan in
advance so that a power outage does not derail your on-time completion of assignments. However, if a power outage does affect your submission deadline, some form of proof from your provider, the internet, or a newspaper must be provided.

• This list is not completely inclusive and other types of absences can be considered with documentation on a case by case basis.

Excused absences must be consistent with university policies in the Graduate Catalog and require appropriate documentation. Additional information can be found in Attendance Policies.

WHEN DO I CONTACT THE UF HELPDESK?
In the event that you have technical difficulties with E-learning, please contact the UF helpdesk at learning-support@ufl.edu, or (352) 392-4357 - select option 2. If your technical difficulties will cause you to miss a due date, you MUST report the problem to E-learning. Include the ticket number that you are given in an e-mail to the instructor to explain the late assignment/quiz/test.

Types of questions that should be directed to the Help Desk:

1. I can't log into E-learning
2. I have clicked on the "submit" button for my quiz and nothing is happening
3. I can't upload an assignment (be sure that you have reviewed the tutorial on how to do this BEFORE you contact the Help Desk)
4. E-learning has given me an error message and I can't submit my assignment.

NOTE: Late work that involves technical difficulties with E-learning MUST be accompanied by a ticket number from the Help Desk.

ALSO - Be sure to be familiar with the hours of operation for the UF help desk. There hours are posted at http://helpdesk.ufl.edu/about/business-hours/

WHEN DO I POST QUESTIONS TO THE COURSE QUESTIONS DISCUSSION BOARD?
Questions that deal with the course itself should be submitted to the Course Questions board. Posted questions should NOT be about grades or a private matter. Do not post personal grade questions on the Course Questions discussion board.

Before posting a question, check those already posted to be sure that you are not duplicating a question. These should be things that other students in the class might have trouble with. For example:

1. I am unable to post comments to VoiceThread.
2. One of the quiz questions did not display properly.

Posting on the Course questions board is the fastest way to get an answer to your question. Be sure to give it a meaningful heading!
Questions of a private nature should be e-mailed to the course instructor (see below on how to e-mail within E-learning).

In all cases, please allow 24 hours for a response. Every effort will be made to answer questions posted over the weekend with 24 hours. If not addressed, they will be addressed on the following Monday.

WHEN DO I EMAIL MY INSTRUCTOR?

Questions about the course should be e-mailed to the instructor through the e-mail tool in E-learning (Canvas).

Examples of e-mail questions for the instructor to get clear, concise responses:

1. I think there is an error in my grade for the assignment in module 3 (be sure to explain exactly why you think there is an error and provide documentation)
2. I am behind in the course and I would like to know how I may catch up (in such a case, your instructor may ask you to set up a Zoom meeting.
3. If you have questions about the course itself, please reread this handbook before asking a question. If the answer is not in the handbook, check the Course Questions discussion board (this discussion board can be located by clicking on the discussions menu tab on the left of the course home page). If the answer to your question is not there, please post the question on the Course Questions discussion board.

DO NOT e-mail the instructor with general course questions. If your question is of a personal nature, e-mail your instructor from within e-learning system using the instructions below.

Late work that involves technical difficulties with E-learning MUST be accompanied by a ticket number from the Help Desk.

HOW TO EMAIL YOUR INSTRUCTOR

To send an e-mail from the course:

1. Click on the mail icon that is located the left side of your screen.
2. Click the "Compose Message" button.
3. "To: window" will display.
4. Locate your instructor’s name.
5. Always include a description in your subject line in the best case this will include the course number, GMS 6705, the module in question (1-13), the unit in question (1-7), and the item such as self check #1. While this subject line may seem overly complicated it will allow the instructor to easily collate and search for specific questions throughout the course.
6. Type your message and add any necessary attachments. Be sure that your subject line adheres to the format indicated above.
7. Click "send."
STUDENT SUPPORT SERVICES
For any technical issues you encounter with your course please contact the UF computing Help Desk at 352-392-4357. For Help Desk hours visit: http://helpdesk.ufl.edu/. For a list of additional student support services links and information please visit: http://www.distance.ufl.edu/student-services.

Special Accommodations - Students requesting disability-related academic accommodations must first register with the Disability Resource Center (http://www.dso.ufl.edu/drc/). This should be done as early in the semester as possible. The Disability Resource Center will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation. The Disability Resource Center is located in 001 Building 0020 (Reid Hall). Their phone number is 352-392-8565.