Introduction to Biomedical Issues in Autism
EDP 369K (10410)
EDP 383 2 (10612)
Fall 2013
Friday 9:00-12:00
SZB 432

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Course Description

This course is a basic introduction to the fundamental biomedical issues relevant to autism. The major emphasis will be on the contributions that neuroscience has made to our understanding of the brain basis of autism spectrum disorders. However, biological findings and medical issues that pertain to non-nervous systems will also be considered and discussed. In order to facilitate the evaluation and discussion of research findings, the course will also provide an overview of basic human functional neuroanatomy as well as an introduction to the various research modalities being applied in biomedical studies of autism. The course will cover findings in the major areas of neuroanatomical, neurobehavioral, and neurochemical research, in addition to other non-neurologic medical findings. We will then explore the implications of this research for autism treatment and for our understanding of autism etiology, from both genetic and environmental perspectives. Findings from autism research will be presented within a historical context, though cutting-edge research will be reviewed and discussed as well.

Course Objectives

All students completing this course will:

- Acquire an understanding of basic human functional neuroanatomy as well as the various research modalities employed in biomedical studies of autism spectrum disorders;
- Increase their general knowledge of the fundamental biomedical issues relevant to autism including neuroanatomical, neurobehavioral, neurochemical, medical, genetic, and environmental issues;

- Become familiar with pertinent findings within the major domains of autism biomedical research;
- Be able to discuss the implications of findings from autism research for education and treatment.

Reading and Reading

1. Hollander, E., Kolevzon, A., & Coyle, J.T. (Eds.). (2011). Textbook of Autism Spectrum Disorders. American Psychiatric Publishing, Inc.

2. Additional journal articles and book chapter readings will be required to be read by all students. Copies of these will be made available on-line or from the instructor.

Activities and Expectations

1. Professionalism, Punctuality, and Participation

Professionalism. Professionalism includes such things as establishing and maintaining positive relationships and interactions with peers, colleagues, and instructors, attending respectfully to others who are sharing information with the class, being flexible and understanding in response to unforeseen changes in the class syllabus, etc. Examples of behaviors likely to result in a loss of professionalism points might include: sleeping in class, doing work that is unrelated to the course in class, talking excessively to your neighbor during lectures or when a classmate is asking a question, and making negative or derogatory comments about others. Please ensure that cell phones are turned off prior to entering the classroom, as phone calls during class are generally disruptive to the instructional activities of the class. The use of laptop computers in class is restricted to taking notes or other class-related uses only.

Punctuality. Attendance and punctuality are key components of overall professionalism. Despite the challenges of highway gridlock and the juggling of personal and professional schedules, it is an expectation for this course that students will attend every class meeting and will arrive to class on time. Attendance in this class is particularly critical to mastering the course objectives, as many of the test questions will be taken from the class lectures. If an absence is expected, students should inform the professor in advance of the reason for the expected absence.

Participation. Students are expected to fully participate in all class activities, including lectures, discussions, and any collaborative learning activities. Student participation and discussion is a critical element of the course. Students will be

expected to come to class well prepared to engage in scholarly discourse about the day's scheduled subject matter.

2. Discussion Worksheets

Discussion worksheets are a way of learning to read with awareness, such that you consciously evaluate both what you are reading and your understanding of it, as a prelude to in-class discussion of the reading in which you will work with your peers to help each other understand the reading in greater depth and with more critical awareness. A discussion worksheet will be completed for an assigned reading prior to each class session (with the exception of the first couple of class sessions). In class, we will discuss the readings. Students will use their discussion worksheets as aids. Worksheets are to be turned in at the end of each class in which the readings are discussed.

3. Paper and Poster Session

Each student will write a paper and present a poster that expands on a topic area explored in reading and lectures. Details on the requirements for the paper and poster will be provided later in the semester. Papers will be due at the end of the semester, and the poster session will be held on the final day of class.

4. Examination

In order to ensure a complete understanding of the course materials, a comprehensive final examination will be administered at the end of the course. This examination will consist of objective and short essay questions from information in the readings, lectures, and article discussions.

Grading Procedures

Punctuality, Participation, & Professionalism 20%
Discussion Worksheets…… 20%
Paper 20%
Poster 20%
Final Exam……..... 20%

93 – 100%	A	77 – 79%	C+
90 – 92%	A-	73 – 76%	C
87 – 89%	B+	70 – 72%	C-
83 – 86%	B	60 – 69%	D
80 – 82%	B-	Below 60%	F

Course Schedule

(This schedule represents current plans. As we go through the semester, these plans may change. Any such changes will be communicated clearly.)

Date	Topic	Foundation Readings
August 28	Introduction	
September 4	Autism: Evolution of a Diagnosis	TASD Ch. 1, 2, 5, 10; DSM-5, pp. 50-59
September 11	The Brain: Development, Anatomy, and Function	Physiology of Behavior, Ch. 3
September 18	Biomedical Research Methods	TBA
September 25	Pathophysiology	TASD Ch. 25-30, 37
October 2	Neuroanatomy	TASD Ch. 31-33, 34
October 9	Functional Brain Imaging	TASD Ch. 35, 36
October 16	Neuropsychology	ASD, Ch. 36
October 23	Associated Conditions	TASD Ch. 16-18
October 30	Genetics	TASD Ch. 19, 23, 24
November 6	Environmental Issues	TASD Ch. 20, 21
November 13	No Class - Society for Neuroscience Meeting	
November 20	Biomedical Treatments	TASD Ch. 38-43
November 27	TBA	
December 6	Poster Session	

University Notices and Policies

University of Texas Honor Code

The core values of The University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the university is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community.

Use of E-Mail for Official Correspondence to Students

Email is recognized as an official mode of university correspondence; therefore, you are responsible for reading your email for university and course-related information and announcements. You are responsible to keep the university informed about changes to your e-mail address. You should check your e-mail regularly and frequently—I recommend daily, but at minimum twice a week—to stay current with university-related communications, some of which may be time-critical. You can find UT Austin's policies and instructions for updating your e-mail address at http://www.utexas.edu/its/policies/emailnotify.php.

Documented Disability Statement

If you require special accommodations, you must obtain a letter that documents your disability from the Services for Students with Disabilities area of the Division of Diversity and Community Engagement (471-6259 voice or 471-4641 TTY for users who are deaf or hard of hearing). Present the letter to me at the beginning of the semester so we can discuss the accommodations you need. No later than five business days before an exam, you should remind me of any testing accommodations you will need. For more information, visit http://www.utexas.edu/diversity/ddce/ssd/.

Religious Holidays

By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, I will give you an opportunity to complete the missed work within a reasonable time after the absence.

Behavior Concerns Advice Line (BCAL)

If you are worried about someone who is acting differently, you may use the Behavior Concerns Advice Line to discuss by phone your concerns about another individual's behavior. This service is provided through a partnership among the Office of the Dean of Students, the Counseling and Mental Health Center (CMHC), the Employee Assistance Program (EAP), and The University of Texas Police Department (UTPD). Call 512-232-5050 or visit http://www.utexas.edu/safety/bcal.

Emergency Evacuation Policy

Occupants of buildings on the UT Austin campus are required to evacuate and assemble outside when a fire alarm is activated or an announcement is made. Please be aware of the following policies regarding evacuation:

- Familiarize yourself with all exit doors of the classroom and the building. Remember that the nearest exit door may not be the one you used when you entered the building.
- If you require assistance to evacuate, inform me in writing during the first week of class.
- In the event of an evacuation, follow my instructions or those of class instructors.
- Do not re-enter a building unless you're given instructions by the Austin Fire Department, the UT Austin Police Department, or the Fire Prevention Services office.