ED 589 - INTRODUCTION TO NEUROSCIENCE AND EDUCATION

Course Syllabus

Instructor Information

Instructors: Dr. Gina Mitchell and Kelly Murillo, MA
E-mail: gmitchell@adams.edu
Address: Adams State University
Psychology Department
208 Edgemont Blvd.
Alamosa, CO 81101

Course Delivery

Online, Open-Enrollment

Credit Hours

3 Semester Hours

Course Prerequisites

Completion of a bachelor's degree

Course Time Limits

This is an open enrollment course. You will have a maximum 1 year from the date of your registration to complete the course. You have a minimum of 6 weeks to complete the course.

Course Materials

Textbooks can be purchased from the Adams State University Bookstore. To order textbooks or obtain information about book titles, you may go to exstudies.adams.edu and click on the "Bookstore" link. Select "DISTLEARN" from the department menu. (http://adams.edu/students/sub/bookstore/)

Use Section Number: 1490 to order books from Bookstore site. This should provide the correct textbook information and ordering options.

If you have questions, you can contact the Bookstore at 719-587-7981, email at asubookstore@adams.edu or by mail to Adams State University Bookstore, 208 Edgemont Blvd., Suite 3140, Alamosa, CO 81101.
ED 589 - INTRODUCTION TO NEUROSCIENCE AND EDUCATION

Required Textbook:


eText available through www.Thuze.com

Catalog Description

This course is designed to give participants information about how the brain functions and how the principles of neuroscience can be used in the classroom. This course is intended for individuals with little or no experience with neuroscience. This course will provide basic knowledge and understanding of how the brain works while focusing on areas that are related to education. Topics of study will include neuroanatomy, brain development, attention, memory, language, and emotion. Students will be introduced to current and past neuroscience research and be asked to apply this knowledge to the educational setting. In order to support each other's learning in an online environment, it is very important we all take time to participate in the group discussions, all outlined online activities, and quizzes and exams. It is the intent of this course that as an educator you will be able to directly support your colleagues by sharing and engaging in current literature, participating in group discussions, creating brain-based lesson plans, and transferring the knowledge you learn from your exam topics directly to the classroom.

Student Learning Outcomes

The student will:

1. Understand how neuroscience and education can come together.
2. Define neuroanatomy and the basic principles of brain function.
3. Explain the role of dopamine in the reward system.
4. Explain how the brain's attentional system, memory system, and emotional system are organized and function.
5. Discuss the role of neuroplasticity in learning.
6. Describe how executive functions work and their role in learning.
7. Apply neuroscience research in the classroom.
8. Critically evaluate literature in educational neuroscience.

Course Requirements

Students will be required to complete 4 assignments worth 10 or 20 points each. They will take module quizzes assessing their knowledge of major concepts. They will take five exams throughout course, including a cumulative final. Additionally, students will participate in 4 group discussions and they will be required to complete 3 journal assignments. Finally, they will complete an APA style research paper that examines brain function and how the information can be used in the classroom.
ED 589 - INTRODUCTION TO NEUROSCIENCE AND EDUCATION

Exams and quizzes will assess student learning of information presented in the reading assignments, course notes, course textbook, and any additional resources that are presented in the modules.

Course Instructions

In each module you will be presented with several reading assignments and corresponding lecture notes. After reading all the material assigned, you should complete the module assignments and/or discussions. When you have completed all the assignments for the module you will be required to take the module quiz.

You will be allowed to take the quizzes only after you have completed the assignments that come before that quiz. Similarly, you will be allowed to take the exams only when you have completed the assignments and the quizzes for that particular exam. Quizzes and exams will be timed. **YOU ARE NOT ALLOWED TO USE YOUR BOOK OR NOTES FOR THE QUIZZES OR EXAMS.**

All assignments, discussions, quizzes, and exams will be completed on Blackboard. If you have any questions, concerns, or problems, please do not hesitate to contact me.

Course Grading

Below is a list of the different assignments you will complete throughout the course and the number of points they are worth. Assignments are equally weighted. Thus, your final grade is determined by the total number of points you earn throughout the semester. Assignments will be graded according to the rubrics that can be found in the Syllabus and Information tab.

Discussion

You will be required to complete 4 discussions throughout the course. Discussion assignments will require you to post a thoughtful response to the question posted. Additionally, you will be required to respond to at least 2 of your peers' responses per discussion topic. Below is a list of things to consider when posting to the discussion board.

*When posting to the discussion area, please type in your comments directly into the discussion forum. Do not type your comments into a document and then attach it to the discussion, unless specifically advised to do so. This method is difficult for some students to access and breaks the flow of discussion.

* Please be courteous. Don't flame (i.e., post insults, invective, or other personally disrespectful comments) or post flamebait (i.e., deliberately provocative or manipulative material intended or likely to elicit flames). Please see the following website for proper web etiquette now termed "netiquette." [http://www.albion.com/netiquette/corerules.html](http://www.albion.com/netiquette/corerules.html).
* Please be careful in the use of sarcasm and irony. Online communication lacks the subtle nonverbal cues that help us interpret such rhetorical flourishes in face-to-face settings, so that it is easy to miss the point or misunderstand. More importantly, it is easy to give or take offense where none is intended. Accordingly, give people the benefit of the doubt, and if you are misunderstood, don’t get defensive. You might also consider using such rhetorical devices somewhat less in this medium than you would in ordinary conversation, since they are generally less effective here.

* Please don’t post excessively or monopolize the conversation. Remember that multiple shoot-from-the-hip posts are much less effective than fewer carefully-thought-out ones, and that some patience in responding will encourage more contributors with a wider variety of ideas and perspectives to participate. Please do not post all of your comments and responses in one day, as it is important that we develop a community in our online environment and check in the discussion board periodically to view new posts and additional dialogue.

* Please be tolerant of those who are still learning how to use the Web and this forum (e.g., people who accidentally send multiple copies of the same message, PEOPLE WHO FORGET AND LEAVE THEIR CAPS LOCK KEY ON WHEN TYPING).

**Journals**

You will also be required to complete 3 journal assignments in this course. Journal assignments ask you to come up with ideas you have for using the course information in your own classroom. They are worth 20 points each.

**Research Paper**

The major assignment for this course is the research paper. The research paper requires you to complete a paper on how neuroscience research can be used in the classroom. More specific instructions for this assignment can be found in the Assignment tab.

**Final Grades**

Quizzes, exams, assignments, discussions, journals, and your research paper are equally weighted. Your final grade will be based on how many points you earn out of the possible 665 points.
ED 589 - INTRODUCTION TO NEUROSCIENCE AND EDUCATION

Grade Distribution and Scale

In alignment with ASU academic policies, no D may apply to a major or minor field.

Grade Distribution

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments</td>
<td>70</td>
</tr>
<tr>
<td>Discussions</td>
<td>70</td>
</tr>
<tr>
<td>Journals</td>
<td>60</td>
</tr>
<tr>
<td>Quizzes</td>
<td>65</td>
</tr>
<tr>
<td>Exams</td>
<td>200</td>
</tr>
<tr>
<td>Research Paper</td>
<td>100</td>
</tr>
<tr>
<td>Comprehensive Final Exam</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total Points</strong></td>
<td><strong>665</strong></td>
</tr>
</tbody>
</table>

Grade Scale

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>665 - 618 points</td>
<td>100 - 93%</td>
</tr>
<tr>
<td>A-</td>
<td>617 - 599 points</td>
<td>92 - 90%</td>
</tr>
<tr>
<td>B+</td>
<td>598 - 579 points</td>
<td>89 - 87%</td>
</tr>
<tr>
<td>B</td>
<td>578 - 552 points</td>
<td>86 - 83%</td>
</tr>
<tr>
<td>B-</td>
<td>551 - 532 points</td>
<td>82 - 80%</td>
</tr>
<tr>
<td>C+</td>
<td>531 - 512 points</td>
<td>79 - 77%</td>
</tr>
<tr>
<td>C</td>
<td>511 - 485 points</td>
<td>76 - 73%</td>
</tr>
<tr>
<td>C-</td>
<td>484 - 466 points</td>
<td>72 - 70%</td>
</tr>
<tr>
<td>D+</td>
<td>465 - 446 points</td>
<td>69 - 67%</td>
</tr>
<tr>
<td>D</td>
<td>445 - 399 points</td>
<td>66 - 60%</td>
</tr>
<tr>
<td>F</td>
<td>Less than 399 points</td>
<td>&lt;60%</td>
</tr>
</tbody>
</table>

ADA Statement

Adams State University complies with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act. Adams State University is committed to achieving equal educational opportunities, providing students with documented disabilities access to university programs. In order for a course to be equally accessible to all students, different accommodations or adjustments may need to be implemented. The Office of Disability Services (ODS) is located in Richardson Hall, Suite 3-100, by mail at 208 Edgemont Blvd., Suite 3-100, Alamosa, CO 81101, by email at odsd@adams.edu, or by calling 719-587-7746. They are your primary resource on campus to discuss the
ED 589 - INTRODUCTION TO NEUROSCIENCE AND EDUCATION

qualifying disability, help you develop an accessibility plan, and achieve success in your courses. Please communicate with them as early as possible; this can be in person, via email, or by phone. The Disability Services Coordinator shall either provide you letters to give to your professors for accommodations or email these letters out to you and your professors.

Academic Integrity

Cheating, plagiarism, unauthorized possession or disposition of academic materials, or the falsification or fabrication of one’s academic work will NOT be tolerated. Any offense may result in a zero for the exam or exercise in question and may result in failure of the course. Please refer to the ASU Student Handbook for more information:
http://www.adams.edu/pubs