Instructor: Dr. Luis Aguerrevere, Ph.D.  
Office: HSTC 105
Office Hours: Monday noon-1PM F2F, Thursdays: 10:30-1:30pm and 2:30pm-4:30pm Zoom
Link to office Hours (Dr. A): https://sfasu.zoom.us/j/9145438559
Office Phone: 936-468-1153
Email: aguerrevle@sfasu.edu

Credits: 3

Prerequisites:
I. Course Description:

Structure and function of the human nervous system, including an introduction to issues of development and neural dysfunction that can interfere with behavior. The study of the structure and function of the human nervous system is a fundamental exploration into the intricate mechanisms that govern both our physiological and behavioral processes. At its core, the nervous system is an elaborate network of specialized cells, neurons, and supporting structures that work harmoniously to transmit information throughout the body. This comprehensive understanding serves as the cornerstone for unraveling human behavior.

Course Credit Hour Justification:
Each week of a 15-week semester, doctoral students will engage in 3 hours of instructor-directed activities, including but not limited to lectures and discussions of readings, case studies, and selected research projects. Additionally, the class will require students to devote a minimum of 6 hours to reading material and completing the necessary course requirements, such as but not limited to out-of-class discussions, readings, participating in the Human Neuroscience Lab.  [total instructor-directed activities=45 hrs and total out-of-class activities=90 hrs; grand total of approximately 135 hrs for the 3 credits]

Modality
Traditional lecture based instruction and reversed classroom instruction where instructor and students are in the same location.

Pre-Requisites
None
II. Intended Learning Outcomes/Goals/Objectives (Program/Student Learning Outcomes):
The complete listing of the standards associated with the PLOs, SLOs, assignments, and assessments are located on the PCOE website.

Program Learning Outcomes (PLOs)

1. **Human Diversity:** Candidates should demonstrate awareness and sensitivity when working professionally with diverse individuals, groups, and communities.

2. **Psychoeducational Foundations:** Candidates must demonstrate appropriate knowledge of the historical, political, and legal aspects, as well as policies and procedures that impact the fields of psychology and education.

3. **Content Knowledge:** Candidates must demonstrate the ability to apply knowledge of biological, psychological, sociocultural, ethical, and legal factors to understand both typical and atypical behavior.

4. **Research & Technology:** Candidates must demonstrate the ability to apply their knowledge of research, statistics, and evaluation methods to inform all areas of practice, from selecting appropriate methods for collecting information to making recommendations for interventions based on empirical evidence.

5. **Professional Skills and Dispositions:** Candidates must conduct themselves in a manner that reflects the values and attitudes associated with the American Psychological Association policies and guidelines. The candidate will demonstrate knowledge, skills, and professional work characteristics/dispositions, effectively applying them in practice.

6. **Application of Principles and Procedures:** Assessment should demonstrate candidates’ effective application of knowledge, skills, and dispositions in the practice of School and Health Service psychology. As part of this assessment, each candidate must document the ability to use both problem-solving (client-centered) and process-focused (consultee-centered) models of consultation.

7. **Communication:** The candidate must demonstrate proficiency in communication skills relevant to the field of psychology, both written and spoken. This may include, but is not limited to, effective writing for different purposes, proficient presentation skills for various audiences and purposes, and appropriate interpersonal skills.

This course aligns with the National Association of School Psychologist (NASP) Model 10 Domains of Practice. Practices that permeate all aspects of service delivery:

**Domain 4:** Interventions and Mental Health Services to Develop Social and Life Skills School psychologists have knowledge of biological, cultural, developmental, and social influences on behavior and mental health, behavioral and emotional impacts on learning and life skills, and evidence-based strategies to promote social–emotional functioning and mental health. Systems-Level Services

**Student Learning Outcomes:**
1. Students will demonstrate a comprehensive understanding of the basic concepts and principles underlying biopsychology, including neural structures, functions, and the neural basis of behavior.
2. Students will integrate knowledge from multiple disciplines, such as biology, psychology, and neuroscience, to analyze and explain the intricate relationships between biological processes and behavior.
3. Students will develop critical thinking skills to evaluate and analyze experimental design, research methodologies, and scientific literature in biopsychology, fostering an ability to assess the validity and reliability of research findings.
4. Students will apply biopsychological principles to real-world scenarios, demonstrating an understanding of how biological factors contribute to various psychological phenomena, mental health disorders, and behavioral outcomes.
5. Students will effectively communicate biopsychological concepts and research findings through written assignments, presentations, and class discussions, demonstrating clarity, accuracy, and an ability to convey complex ideas to diverse audiences.

III. Course Assignments, Activities, Instructional Strategies, use of Technology:

Exams: There will be three (3) examination in this class. The exam will have approx. 50 multiple choice and short essay questions. Students will have three (2) hours to complete the examination (PLO 3; SLO 1).

Written Assignment: One written assignment (approximately 10 double-spaced pages) will be completed by the students. Students will be divided into groups of two and write a paper on the latest research in regards to the topics: the child’s brain, the adolescent brain, and the adult brain. Each group can decide the topic to focus on within the area. They will need to demonstrate how the latest research in the area help us understand the specific brain changes that occur during each of these stages. Students can focus on normal and/or abnormal behavior. The written assignment designed as extensions of the classroom learning experiences, as guidance for reading the scientific literature in a meaningful and efficient manner. At least 20 references from empirical sources should be included in the paper (PLO 3,4, 7; SLO 2,3,4,5). Please see the attached rubric for the specific criteria.

Class Lecture/Presentation (reversed classroom): Three groups of students will lead the discussions during the following lectures: the child’s brain, the adolescent brain, and the adult brain. Each group will need to demonstrate sufficient knowledge about the specific brain changes that occur during each of these stages (PLO 3,4,7; SLO 2,3,4,5). As part of their presentation/lecture students are asked to:

1. Create a Power Point presentation that can be shared with all students.
2. Create a 10 question Quiz to assess the acquisition of knowledge
3. Include a case study (e.g., youtube video) that can be analyze in class.
4. Discuss one impactful research/empirical article in the area.
Laboratory Participation: One time during the semester, PhD students will meet at the Human Neuroscience Laboratory to experience working with a modern neuroimaging technique (i.e., Quantitative Encephalogram). After the meeting students will be required to utilize and apply physiological concepts learned in lecture and from reading laboratory handouts to answer questions. (PLO 6; SLO 1-5).

IV. Evaluation and Assessments (Grading):

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams</td>
<td>60% (20% each)</td>
</tr>
<tr>
<td>Written Assignment</td>
<td>20%</td>
</tr>
<tr>
<td>Presentation</td>
<td>10%</td>
</tr>
<tr>
<td>Laboratory Participation</td>
<td>10%</td>
</tr>
</tbody>
</table>

V. Tentative Course Outline/Calendar:

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Required Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/22/24</td>
<td>Introduction to the course</td>
<td></td>
</tr>
<tr>
<td>1/29/24</td>
<td>Neuron structure and function 1</td>
<td>Section 1: Chapters 1-2</td>
</tr>
<tr>
<td>2/05/24</td>
<td>Neuron structure and function 2 (ZOOM)</td>
<td>Section 1: Chapters 3-4</td>
</tr>
<tr>
<td>2/12/24</td>
<td>Neurocommunication 1</td>
<td>Section 1: Chapters 5-6</td>
</tr>
<tr>
<td>2/19/24</td>
<td>Neurocommunication 2 -Review</td>
<td>Section 1: Chapter 7</td>
</tr>
<tr>
<td>2/26/24</td>
<td>Exam 1 (ZOOM)</td>
<td></td>
</tr>
<tr>
<td>3/04/24</td>
<td>The Nervous System Organization</td>
<td>Section 2: Chapter 1</td>
</tr>
<tr>
<td>3/11/24</td>
<td>Somatosensory Systems</td>
<td>Section 2: Chapter 2,6,7,8</td>
</tr>
<tr>
<td>3/18/24</td>
<td>Visual Processing (ZOOM)</td>
<td>Section 2: Chapters 14-15</td>
</tr>
<tr>
<td>3/25/24</td>
<td>Motor Systems</td>
<td>Section 3: Chapters 1, 2, 3,4,5</td>
</tr>
<tr>
<td>4/01/24</td>
<td>Exam 2</td>
<td></td>
</tr>
<tr>
<td>4/8/24</td>
<td>Laboratory Day (meet in room 105)</td>
<td></td>
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<tr>
<td>4/15/24</td>
<td>Learning &amp; Memory</td>
<td>Section 4: Chapter 7</td>
</tr>
<tr>
<td>4/22/24</td>
<td>Higher Order Processes</td>
<td>Section 4: Chapter 9</td>
</tr>
<tr>
<td>4/29/24</td>
<td>Student presentations</td>
<td></td>
</tr>
<tr>
<td>5/06/24</td>
<td>Exam 3 &amp; Paper Due</td>
<td></td>
</tr>
</tbody>
</table>

VI. Readings (Required and recommended—including texts, websites, articles, etc.):
For this course we will be using an electronic and open source book. Neuroscience Online (https://nba.uth.tmc.edu/neuroscience/) is an easy to navigate web-based electronic textbook. Content is divided into four main sections covering (1) cellular and molecular neurobiology, (2) sensory systems, (3) motor systems, and (4) homeostasis and higher brain functions. These main sections are further divided into an additional 8-15 chapters, each of which is clearly labeled and easy to navigate using the online table of contents.

VII. Course Evaluations:

- Include a statement about the importance of course evaluations and the process as direct feedback to your teaching and as consideration of the relevance on the course assignments to content learning. We urge you NOT to allow any type of reward or bonus points for the completion of course evaluations. Friendly completion reminders are certainly appropriate.

- Possible statement to use:
  “Near the conclusion of each semester, students in the Perkins College of Education electronically evaluate courses (the teaching itself and the content/assignments) taken within the PCOE. Evaluation data is used for a variety of important purposes including:
  ▪ Course and program improvement, planning, and accreditation;
  ▪ Instruction evaluation purposes; and
  ▪ Making decisions on faculty (full-time and part-time) annual evaluation processes, tenure, promotion, pay, and retention.

As you evaluate this course, please be thoughtful, thorough, and accurate in completing the evaluation. Please know that the PCOE faculty is committed to excellence in teaching and continued improvement. Therefore, your response is critical!”

In the Perkins College of Education, the course evaluation process has been simplified and is completed electronically through MySFA. Although the instructor will be able to view the names of students who complete the survey, all ratings and comments are confidential and anonymous, and summarized data will not be available to the instructor until after final grades are posted.

VIII. Student Ethics and Policy

An Institutional Absence may be granted to a student who participates as a representative of the University in academic (including research), extra- or cocurricular, or athletic activities. Students will be excused for institutional purposes from otherwise required academic activity only when a valid Institutional Absence is approved by the appropriate administrative unit or official and the documentation of approval is provided to the faculty member at least five (5) days in advance.

Institutional absences will not be approved for keystone events, defined as: a special or unique assignment, test, project, experience, or other academic exercise identified by the Faculty
member as critical for successful completion of standards of the class and unable to be missed. These events must be identified on the syllabus at the beginning of the semester and communicated to the students. Events added to the syllabus at a later date will not qualify for Keystone Event status. Keystone Events where the date/time is changed will no longer be considered a Keystone Event. Students should make themselves aware of any Keystone Events identified in the syllabus to ensure there are no conflicts.

For keystone events where the assignment dates vary, it is incumbent upon the students to work with their faculty member to not select a conflicting date.

More information on Institutional Absences, including how to apply, can be found at https://www.sfasu.edu/deanofstudents/student-resources/institutional-absences.

The Code of Student Conduct and Academic Integrity (HOP 04-106) outlines the prohibited conduct by any student enrolled in a course at SFA. It is the responsibility of all members of all faculty, staff, and students to adhere to and uphold this policy.

Articles IV, VI, and VII of the new Code of Student Conduct and Academic Integrity outline the violations and procedures concerning academic conduct, including cheating, plagiarism, collusion, and misrepresentation. Cheating includes, but is not limited to: (1) Copying from the test paper (or other assignment) of another student, (2) Possession and/or use during a test of materials that are not authorized by the person giving the test, (3) Using, obtaining, or attempting to obtain by any means the whole or any part of a non-administered test, test key, homework solution, or computer program, or using a test that has been administered in prior classes or semesters without permission of the Faculty member, (4) Substituting for another person, or permitting another person to substitute for one’s self, to take a test, (5) Falsifying research data, laboratory reports, and/or other records or academic work offered for credit, (6) Using any sort of unauthorized resources or technology in completion of educational activities.

Plagiarism is the appropriation of material that is attributable in whole or in part to another source or the use of one’s own previous work in another context without citing that it was used previously, without any indication of the original source, including words, ideas, illustrations, structure, computer code, and other expression or media, and presenting that material as one’s own academic work being offered for credit or in conjunction with a program course or degree requirements.

Collusion is the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any provision of the rules on academic dishonesty, including disclosing and/or distributing the contents of an exam.

Misrepresentation is providing false grades or résumés; providing false or misleading information in an effort to receive a postponement or an extension on a test, quiz, or other
assignment for the purpose of obtaining an academic or financial benefit for oneself or another individual or to injure another student academically or financially. For additional information, go to https://www.sfasu.edu/docs/hops/04-106.pdf.

Withheld Grades Semester Grades Policy (HOP policy 02-206)

Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the coursework because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course to compute the grade point average. For additional information, go to https://www.sfasu.edu/docs/hops/02-206.pdf.

• Students with Disabilities
  To obtain disability-related accommodations, alternate formats, and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services promptly may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

• Student Wellness and Well-Being
  SFA values students’ overall well-being, mental health and the role it plays in academic and overall student success. Students may experience stressors that can impact both their academic experience and their personal well-being. These may include academic pressure and challenges associated with relationships, emotional well-being, alcohol and other drugs, identities, finances, etc.

  If you are experiencing concerns, seeking help, SFA provides a variety of resources to support students’ mental health and wellness. Many of these resources are free, and all of them are confidential.

IX: Resources

• On-campus Resources:
  o The Dean of Students Office (Rusk Building, 3rd floor lobby)
    www.sfasu.edu/deanofstudents
    936.468.7249
dos@sfasu.edu
  o SFASU Counseling Services • www.sfasu.edu/counselingservices
Health and Wellness Hub (corner of E. College and Raguet) • 936-468-2401

- SFASU Human Services Counseling Clinic •
  [www.sfasu.edu/humanservices/139.asp](http://www.sfasu.edu/humanservices/139.asp)
  Human Services Room 202 • 936-468-1041

- The Health and Wellness Hub “The Hub”
  Location: corner of E. College and Raguet St.

  - To support the health and well-being of every Lumberjack, the Health and Wellness Hub offers comprehensive services that treat the whole person – mind, body and spirit. Services include:
    - Health Services
    - Counseling Services
    - Student Outreach and Support
    - Food Pantry
    - Wellness Coaching
    - Alcohol and Other Drug Education

  [www.sfasu.edu/thehub](http://www.sfasu.edu/thehub)
  936.468.4008
  thehub@sfasu.edu

- Crisis Resources:
  - Burke 24-hour crisis line 1(800) 392-8343
  - National Suicide Crisis Prevention: 9-8-8
  - Suicide Prevention Lifeline 1(800) 273-TALK (8255)
  - Crisis Text Line: Text HELLO to 741-741
XI: Other Relevant Course Information:

Rubric

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Excellent (4)</th>
<th>Good (3)</th>
<th>Satisfactory (2)</th>
<th>Needs Improvement (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thesis Statement</td>
<td>Clear, concise, and effectively presents the main idea</td>
<td>Clearly presents the main idea</td>
<td>Presents the main idea with some clarity</td>
<td>Lacks a clear and focused thesis statement</td>
</tr>
<tr>
<td>Content Knowledge</td>
<td>Demonstrates a deep understanding of neuroscience</td>
<td>Shows a good understanding of neuroscience</td>
<td>Demonstrates basic understanding</td>
<td>Shows a lack of understanding</td>
</tr>
<tr>
<td>Organization</td>
<td>Logical flow with well-structured paragraphs</td>
<td>Generally organized with some minor issues</td>
<td>Organization is somewhat confusing</td>
<td>Lack of organization, difficult to follow</td>
</tr>
<tr>
<td>Evidence and Support</td>
<td>Strong use of relevant, credible sources</td>
<td>Adequate use of sources to support arguments</td>
<td>Limited use of sources or weak evidence</td>
<td>Little to no use of sources or evidence</td>
</tr>
<tr>
<td>Clarity of Expression</td>
<td>Clear and concise language with strong transitions</td>
<td>Generally clear, but some areas may be unclear</td>
<td>Language is often unclear or convoluted</td>
<td>Difficult to understand due to poor writing</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>Analyzes information critically and presents insights</td>
<td>Demonstrates critical thinking to some extent</td>
<td>Limited critical thinking</td>
<td>Lacks critical analysis and thoughtful insights</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Summarizes key points and provides a strong conclusion</td>
<td>Summarizes key points but may lack emphasis</td>
<td>Provides a conclusion but lacks strong summary</td>
<td>Lacks a clear and effective conclusion</td>
</tr>
<tr>
<td>Mechanics and Style</td>
<td>Well-written with proper grammar, punctuation, and style</td>
<td>Generally well-written with minor errors</td>
<td>Some errors in grammar and style</td>
<td>Numerous errors in grammar and style</td>
</tr>
<tr>
<td>Formatting and Citations</td>
<td>Properly formatted with accurate citations</td>
<td>Mostly adheres to formatting and citation guidelines</td>
<td>Some issues with formatting or citations</td>
<td>Serious issues with formatting and citations</td>
</tr>
</tbody>
</table>