

## *The Neuroscience of the Altered Mind*

PSYC 485-02  
Senior Seminar  
MWF 3-3:50 pm  
Clough 118



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Office hours: MWF 1:30 – 3:00

**Required Text:** The Accidental Mind, David J. Linden, 2007.

**Class Objectives:** The main objective for this course is to further critical thinking skills through the exploration and discussion of primary research literature, and to provide an opportunity to improve oral and written communication skills. The fundamental principle is for this course is to give you the tools that you will need for the next phase of your career. Thus, it will be structured very similarly to graduate seminar courses, where you are responsible for researching a topic and presenting it to your colleagues. You will become well versed in primary literature, and use empirical data to defend a hypothesis. In addition, this class is meant to be eclectic, drawing from many areas of research within Neuroscience. This course will also be challenging, as we will address how the biology of the brain may give rise to complex aspects of human nature.

All materials may be found at: \\Fileserver1\acad\_dept\_pgm\Psychology\Gerecke\_Kimberly\Public\Senior Seminar

### Class Schedule

DAY	DATE	
Wednesday	August 22	Opening Convocation
Friday	24	Build a Class Workshop; Practical Matters
Monday	27	Practical Matters, Part II
Wednesday	29	Prologue and Chapter 1 Mini-lecture choices due
Friday	31	Chapter 2
Monday	September 3	Labor Day
Wednesday	5	Chapter 3 <b>Topic and target article + 2 alternatives</b>
Friday	7	Chapter 4
Monday	10	Chapter 5
Wednesday	12	Chapter 6
Friday	14	Chapter 7
Monday	17	Chapter 8
Wednesday	19	Chapter 9
Friday	21	Epilogue, General Discussion <b>Outline Due</b>
Monday	24	Mini-lectures:
Wednesday	26	Mini-lectures:
Friday	28	Mini-lectures: <b>Annotated Bibliography - Preliminary</b>
Monday	October 1	Mini-lectures:
Wednesday	3	Mini-lectures:
Friday	5	Mini-lectures:

Monday	8	Mini-lectures: <b>Annotated Bibliography; Revised outline</b>
Wednesday	10	Student Seminar
Friday	12	Student Seminar
<i>NO CLASS</i>	<i>15, 17</i>	<i>Fall Break</i>
Friday	19	Student Seminar
Monday	22	Student Seminar
Wednesday	24	Student Seminar
Friday	26	Student Seminar <b>Smooth Draft of Papers Due</b>
Monday	29	Student Seminar
Wednesday	31	Student Seminar
Friday	November 2	Student Seminar
Monday	5	<i>Student Meetings</i>
Wednesday	7	<i>Student Meetings</i>
Friday	9	<i>Student Meetings</i>
Monday	12	Student Seminar
Wednesday	14	Student Seminar
Friday	16	Student Seminar
Monday	9	Student Seminar
<i>NO CLASS</i>	<i>21, 23</i>	<i>Thanksgiving Break</i>
<b>Monday</b>	<b>26</b>	<b>**Papers Due**</b> Qualifications summary due
Wednesday	28	<i>*Free to complete Paper Peer Reviews*</i>
Friday	30	<i>*Free to complete Paper Peer Reviews*</i>
Monday	December 3	<i>*Free to complete Paper Peer Reviews*</i>
Wednesday	5	<i>*Free to complete Paper Peer Reviews*</i>
Finals Week	December 7 3:00 PM	Paper Peer Reviews Due

**GRADING:**

Oral mini-lectures	10%
Student seminar	25%
Assignments	10%
Class Participation	10%
Paper	30%
Peer Review	15%

**CLASS ATTENDANCE:** As the success of a seminar depends on everyone's participation in class, attendance is required. You get one (1) un-penalized absence. After that, each absence costs you a third of a grade off your cumulative final class grade. So, if you have an "A" at the end of the semester, but you have two extra absences, your final grade will be lowered to a B+. Ten or more unexcused absences is an automatic grade of "F". Failure to present without prior permission is also grounds for failure.

**WRITTEN ASSIGNMENTS:** These reports are to be turned in on time and in class. As a rule, neither late nor electronic submissions will be accepted.

*The Accidental Mind:* Students not presenting will prepare at least 3 questions/comments for the discussion. These can be concerned with points for clarification, but you should have at least one contribution to the discussion that deals with some critical evaluation of the research and/or its implications.

*Student seminars:* You will be given each paper that will be presented one week prior to the seminar. You are to read the paper, and provide a typewritten report not to exceed two pages. This is harder than you think, but important; scientific writing should state the important information without being verbose or adding superfluous information. In other words, use the text space wisely.

Your report should address the following:

- What is the hypothesis? Why is this research important?
- Briefly describe the methodology, and include comments/criticism of the techniques and design.
- What are the major results and conclusions?
- What are the limitations to this study? What are possible alternate explanations? What additional experiments could be done?
- At least 3 questions/comments for the discussion. These can be concerned with points for clarification, but you should have at least one contribution to the discussion that deals with some critical evaluation of the research and/or its implications.

**ORAL PRESENTATIONS:** The format for these presentations should include, but do not have to be limited to PowerPoint slides. The presentations should be informative and interesting to your classmates and include an overview of pertinent research. You will need to set up an appointment to meet with me **at least** a week prior to your presentation to go over a **detailed** outline of your talk.

*The Accidental Mind:* Each student will present a chapter of the book to the class and lead the discussion surrounding the material. Plan to spend about 20 minutes discussing the “meat” of the text (what it’s about), with the remainder of the time spent in discussion of the reading

*Mini-lectures:* A 15 minute lecture on a topic of your choice within the topics the class elects. Allow 10 minutes for discussion, led by student presenter. I would suggest meeting with me at least a week in advance to go over the material you will present.

*Student Seminars:* Presentation of a paper from primary literature. This one must be creative, and focus on a unique aspect of the human phenomenon. Paper must be approved by me prior to class presentation, and be given to me 1 week prior to presentation for distribution to the class.

**Objective:** Oral presentations provide a formal opportunity for students to research a subject of particular interest and to organize that material into an informative and effective classroom presentation.

**Organization:** Each presentation focuses on the primary research article chosen by the student and should include:

**Background:** During the first 10 – 15 minutes, you should summarize and explain the research that provides the theoretical, methodological and empirical context for the assigned reading.

**Presentation of primary literature:** During the next 20 minutes you should cover the following:

1. What is the specific research question being investigated?
2. How does this research contribute to the overall field of knowledge (i.e. what is the significance/importance of the research)?
3. Describe and explain the methodology used to address the research question.
4. Presentation of key results.
5. Conclusions drawn from the results, including possible future questions
6. Comments on the research methodology/interpretations of the author (i.e. were the tests performed adequate to answer the research question, and were the author’s interpretations of the results logical and reasonable?)

**Discussion questions for the class:** Please allow 15 – 20 minutes for class discussions. Presenters should prepare several questions for the audience to be delivered during the presentation and at its conclusion. These questions should be designed to keep students involved, probe student comprehension, and challenge listeners to integrate concepts, create new ideas, and form a coherent understanding of the topic. For example, what are some of the potential implications of this work? Is it believable when taken into context with the greater body of literature? What other explanations could there be for the results?

**Format:** Presentations should be delivered in PowerPoint format, and the PowerPoint file should be archived in the class file on the Academic Volume server.

**STUDENT EVALUATIONS OF ORAL PRESENTATIONS:** Your fellow students will evaluate every presentation and 10% of the presenters' grade will be determined by these critiques. The evaluation sheet is available separately and on the fileserver.

**TERM PAPER:**

**Objective:** Researching and writing a paper provides an opportunity to research in depth a topic of interest, to exercise critical judgment and to improve your ability to communicate your understanding to others.

**Organization:** This paper will be on the same topic as your oral presentation, but it need not follow the same organization and emphasis. While the goal of your talk is to provide general background followed by a detailed examination and group discussion of one article, your research paper should address a much wider survey of recent, primary literature. While you may emphasize one particular study, you should be thorough in reviewing and evaluating other current research.

**Format:** The paper should be typewritten, double-spaced with a font size of 10-12, with one-inch margins all around. While a formal page limit can be restrictive, in general it is difficult to fully explain and explore in detail the topics we are considering in less than 15 pages; at the same time, a paper over 25 pages may tend to become verbose or lack precision and focus. If your paper is less than 15 or more than 25 pages, take care to avoid these problems. (These suggestions refer to pages of text, not including figures and the literature citations.). There is additional material provided in a separate handout.

**PEER REVIEW:** By the end of this course you all will be well versed in critical analysis of scientific works. Therefore, you will serve as peer reviewers for the term paper using criterion based on that used to evaluate journal articles for publication.

**ACADEMIC DISHONESTY:** Explicit details concerning honor code violations are listed in your college handbook. Honor code violations will not be tolerated and will be reported immediately to the appropriate authority. Please review the Rhodes College academic dishonesty policies.