

Neuroscience 373 – Spring 2011
Senior Seminar: Sex and Cognition

Instructor: Dr. Sarah Johnson

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Website: <http://blackboard.moravian.edu/>

When: Tues 7:30pm-10pm

Where: PPHAC 301

Office hours:

Tues 2:30-4:00pm

Wed 3:30-5:00pm

Fri 10-11am or by appt.

Course Objectives: This is the capstone course in the Neuroscience curriculum. In this course, we will explore the role of sex (focusing on biological factors, but not ignoring others) on cognitive abilities. What sex differences in cognitive ability are real (and which are myths/stereotypes)? What roles do genes and sex hormones play? What kinds of cognitive processes (memory, spatial ability, language, etc.) are affected most by sex-related factors? Students will research current scholarly literature on topics related to the field of neuroscience and the designated topic and compose research papers and oral presentations. Emphasis will be placed on searching the literature effectively, using appropriate citations, analyzing and interpreting research data, developing and communicating a thesis. Additionally, students will develop a portfolio that requires them to reflect on their experiences at Moravian and their intended career goals and work on presentation skills.

Specific Course Objectives:

1. Read and discuss important biological and psychological theories and findings about sex differences in cognition, and think critically about how genetic, hormonal, societal, and other factors contribute to these sex differences.
2. Generate class ownership of the material—students and professor will all be required to lead discussions on the material and give presentations on primary literature.
3. Strengthen skills used in reading, analyzing data, and forming conclusions from scientific literature.
4. Develop an understanding of the interdisciplinary approaches in examining a particular problem in the field of neuroscience.
5. Develop skills used in presentation design and public speaking.
6. Reflect actively on aspects of their academic and extracurricular experiences at Moravian College, partially in relation to the material being covered and partially in relation to personal career goals.

Readings: Primary text: Halpern, D. F. (2000). *Sex Differences in Cognitive Abilities* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.

<http://www.amazon.com/Differences-Cognitive-Abilities-Diane-Halpern/dp/0805827927>

Also available on reserve in Reeves.

Other readings will be provided either in class or via the blackboard website, or will be supplied the members of the class.

Course Evaluation:

Attendance: Each student has 2 allowed absences (not including days when they are expected to present). Except where arranged with me (on a case-by-case basis), for each absence beyond the allowed ones, **your final class participation grade will be reduced by 1 letter** (e.g., B+ → C+). A legitimate reason for being late can happen to anyone now and then, but repeated lateness is disrespectful to me and to your classmates. Come see me if you have a legitimate reason for repeated lateness or absence.

Class Participation/Journal: You will be given a grade (see scale below) based on your participation in class discussions and on questions/reactions in response to the readings made in a class journal. Some of these reflections will be written during class in response to prompts given by the professor (or other students), and some will be comments, questions, ideas, etc. made in response to the assigned readings. I expect a journal entry for every reading, and I will collect the class journals at semi-random intervals throughout the term, in an unannounced fashion, so you should bring these journals to every class session

- A:** Contributes to class discussion by asking questions or making comments, in particular providing insightful and thought-provoking ideas that go beyond simple methodological questions. Contributions can include either bringing up points or responding to other's points, but without overly dominating the discussion. Insightful written questions/comments are formed in conjunction with the reading. Ideas go beyond what is read to show an incorporation of your own ideas or a synthesis of information across sources.
- B:** Consistently attentive and engaged but only occasionally contributing spontaneously to class discussions. Questions/comments that consistently reflect an accurate but superficial understanding of the material (e.g., reiterating an authors' point in your own words rather than going beyond the point to add something of your own or make any integration across ideas).
- C:** No spontaneous contribution to class discussion, or contribution with evidence of poor preparation. Lateness beyond 15 min = automatic start grade of C. Written questions/comments are made but reflect poor preparation (e.g., a question that could be answered with minimal effort by the student him- or herself).
- D:** Shows up but doesn't participate except when directly asked a question. Disengaged from class. No written questions/comments apart from what is directly prompted in class.
- F:** Highly disruptive (e.g., table-dancing) or inconsiderate (e.g., snoring loudly during the entire class, initiating fist-fights) behavior in class discussions. No written comments/questions.

Discussion leader: You will be responsible for selecting two articles to be read by the class and leading the discussion of that reading on that day. Your responsibilities for that day will include organizing a list of questions and key larger themes for the class to discuss. You can start off with a brief overview of the readings for no more than 10 minutes, and then you will proceed to engage the class in active discussion. You will bring in a handout to help guide the class through the ideas/questions you have prepared. It is your responsibility to keep the class discussion going for the length of the period; however, other students are, as always, responsible for being active participants—each student's participation on those days will factor particularly heavily into their class participation grades. Arranging hands-on activities, demonstrations, in-class writings, or other unique ways of engaging with the material is highly encouraged!

Presentations: You will be responsible for two presentations during the semester, an interview presentation and a research presentation. The **interview presentation** will be based on an interview that you conducted with a person that is in the field you wish to pursue. The interview itself does not need to be very long, but part of the process will involve generating some questions that relate to sex/gender and how it relates to the person's career choice, daily activities, obstacles in pursuing his/her career, etc. The **research presentation** will be a formal presentation of your research design (with hypothetical results), modeled after the style and format of conference presentations in this field. More info will follow about each of these presentations in separate handouts.

Late policy: Late assignments/papers will be accepted for up to four days after the due date and, unless otherwise noted, will result in **a reduction in points equivalent to one letter grade (10%) for every calendar day late** beginning at 5pm on the day the assignment is due. After the four-day period, a paper will not be accepted and a grade of 0 will be applied. No exceptions will be made for minor technical difficulties (printer or email mishaps), but other circumstances may allow for exceptions as determined by me on a case-by-case basis. ***I accept work by email only if you have arranged with me to do so for that particular assignment.***

Note that it is within my purview as instructor to use qualitative judgments in determining grades for presentations, papers, participation, or other aspects of the course.

Overall grades- Breakdown:

Class participation/Journal	150 pts
Abstract writing exercise	50 pts
Class-led discussions (2 @ 100 pts each)	200 pts
Research paper draft	100 pts
Interview presentation	100 pts
Research paper final version	150 pts
Final portfolio	100 pts
<u>Research presentations & abstracts</u>	<u>150 pts</u>
Total	1000 pts

Plagiarism and cheating:

Any work that you turn in for this class must be entirely your own work. Any sources used must be properly documented and **I will ask you not to use any direct quotes in papers or presentations.** For more information on plagiarism and cheating, refer to the Student Handbook and the following website regarding academic responsibility at Moravian College: <http://www.moravian.edu/studentLife/handbook/academic2.htm>. As this site clearly explains, the consequences for cheating or plagiarism can range from failing the assignment to receiving an F for the final course grade to expulsion, depending on the severity of the case and prior history of offenses. All of the work you submit to me must be entirely your own. It is your responsibility to come see me if you have any questions about your use of sources.

Disabilities:

The Americans with Disabilities Act (ADA) provides for some accommodations to be made for students with certain disabilities. If you have such a disability and are willing to disclose it, you may take advantage of such accommodations. In order to do so, you are required to meet with Mr. Joseph Kempfer in the Office of Learning Services. Accommodations cannot be provided until I have received authorization from Mr. Kempfer. You should also consider taking advantage of the Learning Services Office if you are having difficulty academically in this (or any other) class. The office is located at 1307 Main St. (phone: 610-861-1510).

The Writing Center is located in a building that is not accessible to persons with mobility impairments. If you need the services of the Writing Center, please call 610-861-1392.

Class Schedule: This schedule is tentative. Any changes (e.g., to layout of course coverage or assigned readings) will be announced in class and listed on Blackboard.

Week:	Class topic/activities:	Readings/Assignments:
1 Jan 21 (Fri)	Introduction; Start portfolios	
2 Jan 25	General topic & Research methods	Halpern Ch. 1 (all) & Ch. 2 (pp. 37-48, 74-77)
3 Feb 1	Hormones: <i>Dr. Zaremba guest lecturer</i>	Halpern Ch. 4
4 Feb 8	Cognition; <i>Abstract writing exercise</i>	Halpern Ch. 3
5 Feb 15	Cognitive processes: Class-led discussions 1, 2	<i>Assigned articles</i>
6 Feb 22	Cognitive processes: Class-led discussions 3, 4	<i>Assigned articles</i>
7 Mar 1	Cognitive processes: Class-led discussions 5, 6	<i>Assigned articles</i>
8 Mar 8	No class – Spring break	
9 Mar 15	Sexual dimorphism; Portfolio work – Writing assessment	Halpern Ch. 5; <i>Research paper draft</i>
10 Mar 22	<i>Interview presentations</i>	
11 Mar 29	Psychosocial factors; Portfolio work – Self-statement	Halpern TBD
12 Apr 5	Individual differences: Class-led discussions 1, 2	<i>Assigned articles</i>
13 Apr 12	Individual differences: Class-led discussions 3, 4	<i>Assigned articles</i>
14 Apr 19	Individual differences: Class-led discussions 5, 6	<i>Assigned articles ;</i> <i>Completed portfolios due by</i> <i>Thurs @ 5pm</i>
15 Apr 26	<i>Research presentations</i>	
Finals Wk	<i>Research Paper due by 5pm, Monday May 2nd</i>	