The Department of Psychology in the College of Arts and Sciences is proposing shifting its MA program to an MS. Faculty have found that the title of MA does not adequately reflect the strength in training in the sciences that the graduate students receive. They are not proposing to create a new graduate degree program or modify the current program. It was approved by the Arts and Sciences Curriculum Committee in April 2018.

The proposal was received by the Graduate School on 23 April 2018. It was electronically reviewed by the combined GS/CAA Curriculum subcommittee, chaired by Faculty Fellow Jennifer Schlueter, on 1 May 2018, and following a singular request to the proposers, forwarded on to the Graduate Council for their review on 9 May 2018. It was approved by the Graduate Council, via electronic vote, on 5 June 2018.
Hi John:

Thank you so much for seeking for this answer. I am happy to move this forward to the Graduate Council for their review as it stands.

Best,
Jen

---

Dear Jennifer,

I have consulted with Deborah Haddad (Asst Dean, SBS) and Prof David Hothersall (Prof Emeritus in Psychology who teaches the History of Psychology for us) and neither one has any clue as to the origins of the (now) misrepresentative MA degree.

I am hopeful that your Committee can, on the basis of your level of support expressed below, move this proposal forward so that it can become formalized prior to the inappropriate designation of another Psychology Master’s recipient as an MA rather than an MS.

Please let me know when you have moved our proposal to the next level.

Thank you for your efforts on our behalf,

Best

John

From the desk of:

John P. Bruno, Ph.D.
College of Arts and Sciences Distinguished Professor of Psychology
Dear Professor Bruno:

The combined GS/CAA curriculum subcommittee, which I chair as Faculty Fellow, has reviewed your Department’s proposal for a shift from the MA to the MS. We fully support it and are ready to move it on to its next level of approvals. Before we do so, however, one committee member had questions about why the MA was established in error (instead of the MS). If such material is available, a brief sentence or two included in the proposal would be most welcome.

Please let me know if you have any questions. Upon receipt of the revised proposal, I will forward on to the Graduate Council for their review, and after that to CAA for theirs. Please know that these committees meet infrequently across the summer.

All best,

Jen

Jennifer Schlueter, PhD
Associate Chair, Department of Theatre
Associate Professor | Lab Series Coordinator | Editor, Theatre/Practice
Faculty Fellow, Curriculum, Graduate School
1103 Drake Center, 1849 Cannon Dr, Columbus, OH 43210
614-688-3778
Dear Jennifer and Jill,

Please find attached a proposal to change the Psychology MA to an MS. The proposal was fully approved by the ASC Curriculum Committee (ASCC) on April 20.

We are now advancing the proposal to be reviewed by the Graduate School. The attached documents are (1) the actual proposal, (2) two very large files containing many of the syllabi referenced in the proposal, and (3) the Social and Behavioral Sciences Panel cover letter to ASCC.

Please use this email as a cover letter indicating that the proposal has been duly reviewed and approved by the appropriate ASC curricular bodies (including the full ASC Curriculum Committee).

Please let me know if you have any questions.

Regards,

Bernadette

---

**The Ohio State University**

**Bernadette Vankeerbergen, Ph.D.**
Program Director, Curriculum and Assessment
College of Arts and Sciences
154D Denney Hall, 164 Annie & John Glenn Ave.
Columbus, OH 43210
Phone: 614-688-5679 / Fax: 614-292-6303
http://asccas.osu.edu
Proposal for the Department of Psychology to award the Master of Science and NOT the Master of Arts Degree

(4-6-18)

BACKGROUND

The Department of Psychology at Ohio State offers a PhD in psychology as its only graduate program. However, like many psychology departments at Big 10 universities and universities throughout the nation, students typically earn a Master’s degree in route to the PhD. The Master’s degree is typically awarded at the end of the 2nd year of PhD study. Our Department does not admit students to a terminal Master’s program, though some graduate students who matriculate into the PhD program choose, for personal or professional reasons, to terminate their studies and receive the Master’s degree as a terminal degree if they complete all requirements of a Master’s degree, including the defense of a thesis.

Currently, our students are awarded the Master of Arts (MA) degree – that, frankly, has been a source of confusion for many years. Both students and faculty in Ohio State Psychology believe that the MA does not accurately capture a) the clear scientific bases of the issues that they research (typically brain-behavior relations), b) the tight scientific and quantitative methods that are utilized in their research, and c) the large number of science-based courses that are required as part of their graduate training. Note that this proposal was initiated by our graduate students, which reflects the strength of their conviction that they are not satisfied with receipt of an MA rather than an MS and feel that their interests would be better served, and their training more accurately acknowledged, if they received the MS degree after completion of the thesis at the end of their 2nd year in our graduate program. The faculty strongly concur. Below, we provide data supporting the sentiment of the students and faculty on this issue.

Note that we do not propose creating a new graduate degree program or modifying our current program. We are not proposing any changes to our curriculum or staffing. This is an error that should be corrected, not a change driven by significant adjustments to our curriculum or training. The evidence for Psychology as a science is quite strong. The methodological backbone of our students research projects is closely tied to the scientific method and the analyses of our data are driven by sophisticated quantitative techniques. The didactic training given to our students is inherently scientific in nature. Finally, IT MUST BE STRESSED THE PSYCHOLOGY AT OSU HAS BEEN RECOGNIZED BY ODHE (formerly, BOR) AS A STEM DISCIPLINE AND RECEIVES STEM SUBSIDY FOR ALL RANKS OF STUDENTS.

No additional resources are required from the Department of Psychology, the College of Arts and Sciences, or the Graduate School. This change would have no effect on faculty or administrative workload or graduate student enrollments.
RATIONALE FOR THE CHANGE

The MA is a generic Master’s degree awarded across the arts, humanities, and social sciences. By contrast, the MS is a specific Master’s degree awarded to those training in the sciences who have demonstrated a mastery of subject material and/or written an empirical thesis based on data collection and analysis that advance the knowledge base of a scientific discipline. We believe (i.e., our students and faculty) that the MS degree better reflects the nature of the work that our graduate students do. Although we train PhD student as our primary graduate education mission, some students do leave the university prior to completion of the PhD but after completion of a Master’s degree. We feel, as do our students, that receiving an MA rather than an MS mis-characterizes their training and places them at a competitive disadvantage when they are searching for the kinds of science-related jobs in industry and government for which they are trained. Given misunderstandings by the public in what psychology as a discipline does, it is likely recruiters trying to decide between two applicants for a position, one with an MA in Psychology and one with an MS in Psychology (or an MS in some other social science), are likely to believe mistakenly that the person with the MS is more qualified and thus award the job to the applicant with an MS. This is not good for our students or the university.

DATA IN SUPPORT OF THE CHANGE

Perhaps the appropriateness of the MS degree in Psychology can best be supported by an inspection of the titles of recent Master’s theses over the past years as well as an inspection of the courses (and their accompanying syllabi) that these students take in preparation for their thesis work and degree. In looking over, this material it seems absolutely clear why Psychology is seen as a STEM discipline and why we are making this request.

Titles of Representative Master’s Theses:

Transient Inactivation of the Neonatal Ventral Hippocampus Disrupts Mesolimbic Regulation of Prefrontal Glutamate Release / by Dave Bortz

Acetaminophen, affect, and risk: an analysis of psychological and neurochemical mechanisms / by Alexis A. Keaveney

The association between resting cardiac vagal tone and facets of perseveration: sex as a moderating factor / by Gina M. Gerardo

Associations between resting heart rate variability, depressive symptoms, and autobiographical memory specificity / by Nicole Feeling

A biobehavioral intervention for breast cancer patients: sexuality and body image outcomes and mediators of change / by Kristen Cecilia Williams
Cancer-specific stress and absolute lymphocyte count trajectories in patients with chronic lymphocytic leukemia / by David Michael Weiss

Differences in human heart rate variability due to trait and state worry: a meta-analysis / by Jarret Mathew Holley

Does response modality influence conflict? modelling vocal and manual response stroop interference / by Alex Fennell

Does the future look bright? Visual imagery perspective moderates the impact of trait biases in expectations / by Zachary Adolph Niese

Extending the Johnson-Neyman procedure to categorical independent variables: mathematical derivations and computational tools / by Amanda Kay Montoya

Advancing the formulation and testing of multilevel mediation and moderated mediation models / by Nicholas J. Rockwood

Altered NMDA Receptor Structure and Function Contribute to Deficits in Forebrain-Dependent Learning and Memory in Adult Rats Exposed to Ethanol as Neonates / by Molly Goodfellow

Effects of Oxytocin in the Medial Prefrontal Cortex: Anxiety, Maternal Care, and Maternal Aggression / by Sara Sabih

Courses Students Take in Preparation for the Master's and Ph.D. Degrees

Courses taken by ALL 1st or 2nd year students:

PSYCH 6810 "Statistical methods in psychology I": Basic concepts of descriptive and inferential statistics; includes estimation, hypothesis testing, non-parametric techniques, and analysis of variance.

PSYCH 6811: "Statistical methods in psychology II": Simple linear regression and correlation, multiple linear regression, interactions; introduction to other related methods such as nonlinear regression and random effects models.

Courses taken by all Clinical Students, all Behavioral Neuroscience Students, and some Cognitive Neuroscience students:

PSYCH 5613H: “Introduction to Biological Psychiatry”: For each disorder, students will learn the diagnostic classifications, presenting symptomatology, underlying neurobiological dysfunctions, and therapeutic strategies (pharmacological vs non-pharmacological).

PSYCH 6853: “Developmental Psychopathology I”: syllabi included
PSYCH 6854: “Developmental Psychopathology II”: syllabi included

Courses taken by all Behavioral Neuroscience Students and some Cognitive and Clinical students:
PSYCH 7898: “Seminar in Advanced Behavioral Neuroscience”: syllabi included
PSYCH 5602: “Behavioral Genetics”: syllabi included
PSYCH 5898: “Seminar in Behavioral Neuroscience”: syllabi included

Courses taken by all Quantitative Psychology Students and from many other areas of Psychology, Business, and Engineering:
PSYCH 6820: Introduction to Bayesian Statistics for Psychological Data
PSYCH 6822: Mediation, Moderation, and Conditional Process Analysis
PSYCH 7820: Fundamentals of Factor Analysis
PSYCH 7821: Covariance Structure Modeling (structural equation models)
PSYCH 7822: Fundamentals of Item Response Theory
PSYCH 7823: Analysis of Repeated Measures and Longitudinal Data
PSYCH 7896: Special Topics in Quantitative Psychology
PSYCH 8896: Advanced Seminar in Quantitative Psychology

**(MANY OF THE SYLABBI FOR THESE COURSES HAVE BEEN INCLUDED IN THE ZIP FILE THAT ACCOMPANIES THIS REQUEST)**

STUDENT AND FACULTY SENTIMENT

The graduate students and faculty are overwhelmingly in support of changing the Master’s degree awarded from MA to MS. The movement to enact this change began in May 2017 and was initiated by the graduate students through the Psychology Graduate Student Association and then continued in discussions between the students and Department Chair, John P. Bruno. The leaders of the PGSA administered a survey first to graduate students and then, a month later, to the faculty. The data collected from this survey were compiled in June 2017. By then, 92 graduate students (of 147 currently enrolled, 63%) and 29 faculty (of 55; 53%) had responded to the survey. The survey asked respondents to indicate their position (graduate student or faculty), their departmental area (behavioral neuroscience, clinical, cognitive, decision, developmental, intellectual and developmental disabilities, quantitative, or social). The final question asked respondents to rate their “level of support for a change
to an MS” on a scale from “Strongly Opposed” to “Strongly in Favor” with a middle point labeled “Indifferent”.

Overall support for the change was strong with 75% of respondents indicating strongly in favor, 10% slightly in favor, 10% indifferent, 2% slightly opposed, and 2% strongly opposed (See Table 1).

Table 1: Counts in favor and opposed by position

<table>
<thead>
<tr>
<th></th>
<th>Graduate Students</th>
<th>Faculty</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly in Favor</td>
<td>79 (85.9%)</td>
<td>12 (41.4%)</td>
<td>91 (75.2%)</td>
</tr>
<tr>
<td>Slightly in Favor</td>
<td>7 (7.6%)</td>
<td>5 (17.2%)</td>
<td>12 (9.9%)</td>
</tr>
<tr>
<td>Indifferent</td>
<td>5 (5.4%)</td>
<td>8 (27.6%)</td>
<td>13 (10.7%)</td>
</tr>
<tr>
<td>Slightly Opposed</td>
<td>1 (1.1%)</td>
<td>2 (6.9%)</td>
<td>3 (2.5%)</td>
</tr>
<tr>
<td>Strongly Opposed</td>
<td>0 (0%)</td>
<td>2 (6.9%)</td>
<td>2 (1.7%)</td>
</tr>
<tr>
<td>Response rate</td>
<td>64%</td>
<td>53%</td>
<td>60%</td>
</tr>
</tbody>
</table>

Percentages are percentages within columns

The graduate students felt it was important to assess how support may vary across different areas of psychology, as an MA and an MS may carry different weight in different academic areas. Two areas were unanimously in favor of the change to an MS (Behavioral Neuroscience and Quantitative Psychology). Four areas had no responses in opposition: Cognitive, Decision, IDD, and Social. Only two areas contained students or faculty who expressed opposition to the change, but they were a clear minority. Table 2 pools the responses of faculty and students but separates responses by area.

At the end of the survey students were allowed to write additional comments. Some of the comments have been compiled below. Many students noted identifying with the term science more and how this degree will better represent the work they do in this department. Some expressed a wish that such a change could be applied retroactively so that their MA already earned could be changed to an MS.

Table 2: Counts and percentages in favor and opposed by departmental area

<table>
<thead>
<tr>
<th></th>
<th>BN</th>
<th>Clinical</th>
<th>Cognitive</th>
<th>Decision</th>
<th>Develop</th>
<th>IDD</th>
<th>Quant</th>
<th>Social</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly in Favor</td>
<td>2 (66.7%)</td>
<td>31 (73.8%)</td>
<td>17 (81.0%)</td>
<td>4 (80%)</td>
<td>7 (70%)</td>
<td>7 (70%)</td>
<td>7 (87.5%)</td>
<td>19 (76.0%)</td>
</tr>
<tr>
<td>Slightly in Favor</td>
<td>1 (33.3%)</td>
<td>3 (7.1%)</td>
<td>2 (9.5%)</td>
<td>0 (0%)</td>
<td>1 (10.0%)</td>
<td>2 (18.2%)</td>
<td>1 (12.5%)</td>
<td>3 (12.0%)</td>
</tr>
<tr>
<td>Indifferent</td>
<td>0 (0%)</td>
<td>5 (11.9%)</td>
<td>2 (9.5%)</td>
<td>1 (20%)</td>
<td>0 (0%)</td>
<td>2 (18.2%)</td>
<td>0 (0%)</td>
<td>3 (12.0%)</td>
</tr>
<tr>
<td>Slightly Opposed</td>
<td>0 (0%)</td>
<td>1 (2.4%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>2 (20.0%)</td>
<td>0 (0.0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Strongly Opposed</td>
<td>0 (0%)</td>
<td>2 (4.8%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
</tbody>
</table>

Percentages are percentages within columns
QUOTES FROM CURRENT STUDENTS

I will be starting my second year and hope this would take effect for my upcoming Masters!

Developmental Graduate Student

I think this is a great proposal and agree that it reflects the work we do in the program.

Clinical Graduate Student

I think changing to an MS is an excellent idea and I strongly support it. Way too many of our psych students leave after their masters, and I think the department owes those students a degree that will actually be useful in the job market.

Decision Graduate Student

I received my MA several years ago from this department and have always held the complaint that an 'MS' is a much more appropriate representation of my studies.

Cognitive Graduate Student

I think this is a great idea and with more accurately reflect the nature of work that we do and the emphasis our program places on science (e.g. rigorous statistical and research methods).

Clinical Graduate Student

This should have been done years ago! M.S. degrees are more highly regarded than M.A. degrees in industry and government

Quantitative Graduate Student

100% support this transition! (… and feel a little peeved it didn’t happen sooner…. can we get our previous M.A. degrees changed retroactively?)

Social Graduate Student

I strongly believe that this is a much needed change.

Cognitive Graduate Student

Seems like an obviously beneficial change, and more accurately representative of the demands of the degree.

Social Graduate Student

I agree that the word science better represents our training and the work required to complete a thesis.

Clinical Graduate Student

It has always been unclear to me why we it’s an MA rather than an MS in the first place - I never felt like my Master’s reflected the work I did to earn it. I think this would be much more reflective of the work needed to earn the degree.

Social Graduate Student

I would also like the option to change the masters I already got into a masters of science!

Decision Graduate Student

A change to an MS would be a wise revision. Fair or not, MS degrees carry a more prestigious connotation than MA degrees, and would grant more legitimacy to psychologists being perceived as scientists.

Clinical Graduate Student
If requirements/curriculum do not change, would there be potential to change MA to MS for students that have already received their degree?

Clinical Graduate Student

My bachelor degree in psychology is a BS, and I am doing even more scientific/research work now. An MS truly better reflects the nature and rigor of the program.

IDD Graduate Student

This won’t affect me at this point, but getting a Master of "Arts" did feel odd/disjointed with the type of work I was doing in order to earn the degree

Social Graduate Student

At the January 2018 faculty meeting, Professor Andrew F. Hayes, co-Director of Graduate Studies, and Professor John P. Bruno, Chair of the Department, presented these findings to the faculty. Some discussion occurred. Following discussion, Professor Bruno called for a vote by show of hands who supported and who opposed the proposal. Support for this proposal was unanimous.

MA vs MS in other Departments and Institutions

At OSU and other universities, the master’s degree is frequently awarded to students who complete the kind of graduate training program we offer. However, there are inconsistencies in the name of the degree even though the differences in the training and curriculum, if any, seem minor. For instance, the majority of SBS departments at OSU require training in data analysis, theory development, and use the scientific method to answers questions relevant to their discipline. Yet some offer an MA whereas others offer an MS, either as a terminal degree or in route to the PhD.

There is a similar mixed-practice in psychology departments at universities in the state of Ohio. Of those that award a PhD as well as a Master’s in route to the PhD, including Ohio University, University of Cincinnati, Miami University, and Case Western Reserve University. Of these, Ohio University awards an MS in Psychology, whereas University of Cincinnati and Miami University award the MA.

Like Ohio State, all other psychology departments at Big 10 universities award a Master’s degree to students enrolled in a PhD programs, though they differ when the degree is awarded (e.g., some award it following the candidacy exam in the third year, some following the completion of a thesis in the 2nd year). Wisconsin, Michigan, Penn State, Maryland, Illinois, and Purdue award the MS, while Iowa, Ohio State, Rutgers, Northwestern and Nebraska award the MA. As within SBS at OSU, from what we can discern, the difference between universities in the names of their degrees does not reflect differences in the kinds of activities that justify the degree. All are science-oriented graduate programs that require the collection and analysis of data using the scientific method, just as we require at OSU.
SUMMARY

Psychology is a scientific discipline. Graduate students in our Department engage in scientific research in order to advance our understanding of the human experience. From the first semester of enrollment until the completion of their degree, they contemplate and create theory, collect data, use statistical methods to analyze that data, and present their work at scientific conferences and publish in empirical journals. All students in our program, regardless of area, earn a Master’s degree in route to the PhD. Yet the degree awarded is a Master of Arts rather than Master of Science. We do not know the origins of the decision for the University to confer the MA rather than the MS to graduate students in Psychology. But as our students and faculty recognize, the MA is not consistent in name with the work required in our program, and for those who leave OSU prior to completion of the PhD, having an MA rather than an MS likely makes them less competitive relative to graduates of MS-granting programs when searching for jobs for which they are trained and qualified. The faculty and graduate students strongly believe that it is past time that the scientific contributions and accomplishments of our students be recognized by conferring on them the Master of Science rather than the Master of Arts.
April 18, 2018

Professor Meg Daly
Chair, Arts and Sciences Curriculum Committee

Re: Approval to Change the Master of Arts to a Master of Science Degree in Psychology

Dear Meg,

The Department of Psychology proposed to change their current Master of Arts (MA) to a Master of Science (MS) degree. Currently, Psychology offers the PhD as its only graduate degree program. Many students earn a Master’s degree in route to the PhD. As a matter of tradition, the Master’s degree awarded by the Department of Psychology has been the MA. The Department of Psychology proposed to change the MA to the MS degree to better reflect the clear scientific bases of the research students engage in (typically brain-behavior relations), the scientific and quantitative methods utilized in their research, and the large number of science-based courses that are required as part of their graduate training. In addition, the Ohio Department of Higher Education recognizes the Department of Psychology at Ohio State University as a STEM discipline, further supporting the proposed degree change.

The SBS Panel of the ASCC agreed that the proposed degree change is appropriate and warranted. The Panel did wonder how many students would be impacted by this change. Regardless, the proposal was unanimously approved with no contingencies on April 10, 2018. We now advance the proposal to the Arts and Sciences Curriculum Committee with a motion to approve.

Sincerely,

Christina M. Roup
Chair, ASCC SBS Panel
Syllabus

PSYCHOLOGY 7858
Seminars in the Psychology of Exceptional Children and Adults: Assessment
(3 credit hours)
Fall Semester
Tuesday from 5:00 - 7:45 p.m.
250 McCampbell Hall, 1581 Dodd Drive

Instructor: Luc Lecavalier, Ph.D.
371-D McCampbell Hall
1581 Dodd Drive
Tel: 685-8522
E-Mail: luc.lecavalier@osumc.edu

Office Hours: On most weeks, I will be available before class starts. I am also available by appointment.

COURSE DESCRIPTION

The purpose of this course is to expose graduate students to some relevant issues in the assessment of exceptional children and adults. An emphasis will be placed on children with intellectual and developmental disabilities. Students will be exposed to the development, conceptual underpinnings, administration, and interpretation of widely used instruments. The lectures will cover the following topics: cognitive testing, developmental assessments, adaptive functioning, autism spectrum disorder, rating scales, psychopathology, and language. They will also cover report writing and ethical principles and standards related to assessment.

STUDENTS WITH DISABILITIES

Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated, and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901;
http://www.ods.ohio-state.edu/
COURSE REQUIREMENTS AND GRADING

• Class attendance. Students are expected to attend class.

• Advance preparation of assigned reading. The assigned reading material is not identical with the presentations in class. The reading materials supplement the lectures and are necessary to optimize learning and relevance of class discussions, and to respond optimally to the quizzes.

• Grading. Students can earn a maximum of 100 points. There will be 2 assignments worth a total of 75 points. The format of the assignments will vary but will be based on the material covered in class and pertinent readings. Participation in class discussions is worth 25 points.

The following grading system will be used:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>≥ 86</td>
</tr>
<tr>
<td>A-</td>
<td>80-85</td>
</tr>
<tr>
<td>B+</td>
<td>76-79</td>
</tr>
<tr>
<td>B</td>
<td>74-75</td>
</tr>
<tr>
<td>B-</td>
<td>72-73</td>
</tr>
<tr>
<td>C+</td>
<td>70-71</td>
</tr>
<tr>
<td>C</td>
<td>68-69</td>
</tr>
<tr>
<td>C-</td>
<td>65-67</td>
</tr>
<tr>
<td>D+</td>
<td>63-64</td>
</tr>
<tr>
<td>D</td>
<td>61-62</td>
</tr>
<tr>
<td>E</td>
<td>≤ 60</td>
</tr>
</tbody>
</table>

REQUIRED TEXTS

• See readings below

RECOMMENDED TEXTS


ACADEMIC MISCONDUCT

All students at the Ohio State University are bound by the Code of Student Conduct (see http://oaa.ohio-state.edu/coam/code.html). Violations of the code in this class will be dealt with according to the procedures detailed in that code. Specifically, any alleged cases of misconduct will be referred to the Committee on Academic Misconduct. It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct.

CLASS SCHEDULE AND WEEKLY READING MATERIAL

<table>
<thead>
<tr>
<th>Weeks &amp; Dates</th>
<th>Topics and Presenter</th>
<th>Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Week</td>
<td>Date</td>
<td>Topic</td>
</tr>
<tr>
<td>------</td>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td>Week 9</td>
<td>10/18/16</td>
<td>No Class – Fall Break</td>
</tr>
</tbody>
</table>

[Assignment #1 is due]
<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Reading Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 13 11/15/16</td>
<td>Psychopathology</td>
<td>Same as above</td>
</tr>
<tr>
<td>Week 14 11/22/16</td>
<td>No Class Thanksgiving</td>
<td></td>
</tr>
<tr>
<td>Week 16 12/6/16</td>
<td>Report writing</td>
<td>Same as above</td>
</tr>
</tbody>
</table>
PSYCHOLOGY 6652
Empirically Supported Therapies for Children with Developmental Disabilities
The Ohio State University

Spring 2017
Tuesdays, 11:15am-2:00pm
McCampbell Hall Room 250

INSTRUCTOR
Katherine Walton, PhD
371F McCampbell Hall, 1581 Dodd Drive (Nisonger Center)
Phone: 614-685-9087
E-mail: Katherine.walton@osumc.edu
Office Hours: By appointment

COURSE DESCRIPTION AND OBJECTIVES

This course has five didactic components: 1) once weekly, 165-minute lectures/course activities, 2) outside-of-class reading/preparation, 3) two written assignments, 4) three quizzes, and 5) an in-class presentation.

The purpose of this course is for students to understand theory and application of various empirically-supported treatments for children with developmental disabilities. The course will cover empirically-supported treatments from a variety of theoretical orientations, including behavioral, cognitive behavioral, and developmental approaches. Various formats (e.g., individual, group, parent training) interventions will also be covered. Finally, students will be expected to understand the process by which therapies gain empirical support and the standards by which a therapy is judged to be “empirically supported.”

By the end of this course, students should be able to:

1. Understand the meanings of the terms “evidence based practice” and “empirically supported treatment,” and understand how therapies for people with developmental disabilities are empirically validated and tested.
2. Have a firm grasp of basic behavioral principles, and be able to flexibly apply these principle in order to create treatment plans for managing challenging behaviors and building skills in people with developmental disabilities.
3. Be able to describe, differentiate, compare, and contrast different early intervention strategies for children with autism, including structured behavioral, developmental, and naturalistic behavioral approaches.
4. Understand and discuss the role of parents and other family members in therapies for children with developmental disabilities.
5. Be able to describe and apply cognitive behavioral strategies for managing social deficits and mental health challenges in children with DD, including how to adjust these strategies to be most effective for children with various learning challenges.
6. Understand how psychotropic medication may fit into an overall treatment plan for a child with developmental disability, and when referrals for medication consideration may be appropriate.
7. Be able to consider and thoughtfully discuss the role of cultural differences and ethical issues surrounding therapies for children with developmental disabilities.
COURSE MATERIALS

Required Text:

All other course materials (including assigned book chapters) will be made available on Carmen (https://carmen.osu.edu/) and are listed in the course schedule on this syllabus. Readings may be subject to change. Students will be notified in class as well as by modification of the course activities schedule posted on Carmen of any changes that are made to the reading schedule.

COURSE REQUIREMENTS AND GRADING

Course Assignments

The following is a breakdown of the assignments that you will be graded on in this course. There will be a total of 100 points for the course.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Due Date</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes (3)</td>
<td>February 28, 2017</td>
<td>10 points each (total 30 points)</td>
</tr>
<tr>
<td></td>
<td>March 28, 2017</td>
<td></td>
</tr>
<tr>
<td></td>
<td>May 1, 2017</td>
<td></td>
</tr>
<tr>
<td>Class Engagement and Participation</td>
<td>N/A</td>
<td>20 points</td>
</tr>
<tr>
<td>Treatment Plan Assignment 1</td>
<td>March 7, 2017</td>
<td>15 points</td>
</tr>
<tr>
<td>Treatment Plan Assignment 2</td>
<td>May 1, 2017</td>
<td>15 points</td>
</tr>
<tr>
<td>Course Presentation</td>
<td>Varies (sign up on first day)</td>
<td>20 points</td>
</tr>
</tbody>
</table>

Grades will be assigned based upon total points for the course as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93-100</td>
</tr>
<tr>
<td>A-</td>
<td>90-92.9</td>
</tr>
<tr>
<td>B+</td>
<td>87-89.9</td>
</tr>
<tr>
<td>B</td>
<td>83-86.9</td>
</tr>
<tr>
<td>B-</td>
<td>80-82.9</td>
</tr>
<tr>
<td>C+</td>
<td>77-79.9</td>
</tr>
<tr>
<td>C</td>
<td>73-76.9</td>
</tr>
<tr>
<td>C-</td>
<td>70-72.9</td>
</tr>
<tr>
<td>D+</td>
<td>67-69.9</td>
</tr>
<tr>
<td>D</td>
<td>60-66.9</td>
</tr>
<tr>
<td>E</td>
<td>Below 60</td>
</tr>
</tbody>
</table>

Course Readings and Class Participation

Course readings will include journal articles, book chapters, and other sources and will be posted on Carmen. Much of course will consist of discussion of assigned articles and readings; therefore, carefully completing assigned readings prior to course sessions is crucial. You will be graded based upon your course participation throughout the semester. Students are expected to come to class prepared and to engage actively in class discussion.

Quizzes
There will be 3 quizzes spread throughout the semester. Each will be worth 10 points and will cover major points from the relevant section of the course. Quizzes may include a variety of question types, including multiple choice, short answer, fill-in-the-blank/matching, and short essay.

**Treatment Plan Assignments**
You will be asked to complete two written assignments during the course of the semester. Each will be approximately 4-5 pages long and will consist of a detailed treatment plan and justification for the treatment plan. You will be given a brief vignette related to a child with a developmental disability, and will be asked to specifically answer a number of questions and create a treatment plan for the child. One treatment plan will be based on a behavioral perspective, and the other from a different theoretical orientation (e.g., cognitive behavioral, developmental, etc.). Detailed instructions for these assignments will be distributed in class.

**Class Presentation**
Each student will be asked to make a brief presentation to the class. Presentation topics will be chosen early in the semester, and **student presentations will be scheduled throughout the semester**. In your presentation, you will be expected to cover the theoretical background, basic tenets, and brief review of the research evidence for one specific treatment approach. Additional details about the presentation will be distributed in the first week of class.

**COURSE POLICIES AND PROCEDURES**

**Course Enrollment:** All students must be officially enrolled in the course by the end of the third full week of the quarter. No requests to add the course will be approved by the Chair after that time. Enrolling officially and on time is solely the responsibility of the student.

**Sexual misconduct/relationship violence:** Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at [http://titleix.osu.edu](http://titleix.osu.edu) or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu

**Disability Services:** The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. **SLDS contact information:** slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

**Attendance Policy:** Course attendance will contribute to students’ participation grade. Student absences are expected to be discussed with the course instructor and approved prior to the absence.

**Late Assignments and Extensions:** Late assignments will be accepted only on a case-by-case basis. If a circumstance arises that may cause an assignment to be late, the student must let the instructor know as soon as possible and discuss whether any accommodation may be made.
**Rescheduling Quizzes and Presentations**: Quizzes and presentations will be rescheduled only in exceptional circumstances. These requests will be considered on a case-by-case basis and will require documentation of the circumstance (e.g., doctor’s note, documentation of attendance at a funeral, documentation of presenting work at a professional conference) to be considered.

**Academic Misconduct**: It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the [Code of Student Conduct](http://studentconduct.osu.edu) at [http://studentconduct.osu.edu](http://studentconduct.osu.edu)
<table>
<thead>
<tr>
<th>Class No.</th>
<th>Date</th>
<th>Topic</th>
<th>Course Readings/Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week</td>
<td>Date</td>
<td>Topic</td>
<td>Chapters/References</td>
</tr>
<tr>
<td>------</td>
<td>------------</td>
<td>----------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Date</td>
<td>Activity</td>
<td>Reading</td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
</tbody>
</table>
Credit: 3 credit hours
Location: 250 McCampbell Hall
Time: Tuesdays 4:00 p.m. – 6:48 p.m.
Instructor: Susan Havercamp, Ph.D.
T.A.: TBD
Office Hours: By appointment; McCampbell Hall room 371:
Contact via email: susan.havercamp@osumc.edu

Ethics: the discipline dealing with what is good and bad and with moral duty and obligation; a set of moral principles; a theory or system of moral values; the principles of conduct governing an individual or group (professional ethics); a guiding philosophy; a consciousness of moral importance

Course Description:
Most psychologists enter the field with a strong and certain desire to help others, but clinic practice and research endeavors often involve decision-making in the context of ethical ambiguity. This course will consider many ethical questions and dilemmas that psychologists encounter in their everyday clinical practice, research, and teaching. This course will take a problem-solving approach to ethical decision-making with students working toward consensus around constructive means for preventing problems, recognizing, approaching, and resolving ethical predicaments. Ethical guidelines established by the American Psychological Association (APA Ethics Code) will be reviewed in the context of practice in the field of intellectual and developmental disabilities. This course will encourage students to think deeply about ethical principles and the professional roles and responsibilities of a psychologist. This course has been designed as an advanced course in psychology for graduate students in intellectual and developmental disability psychology.

The purpose of this course is to provide the student with a working understanding of fundamental ethical principles in psychology and an effective problem-solving strategy to deal with ethical dilemmas.
Course Objectives:

By the conclusion of the course, each student will:

1. discuss the codes of conduct that guide professional practice in psychology as well as how ethical codes are applied and enforced.
2. understand the distinctions among privacy, privilege, and confidentiality and be familiar with the confidentiality provisions in the APA Ethics Code.
3. understand the principles and ethical guidelines and prohibitions surrounding multiple relationships. Students will participate in a debate of ethical behavior in scenarios likely to come into play in developmental disabilities.
4. discuss the ethical issues and obligations of testing, particularly testing to determine eligibility for services.
5. appreciate the ethical issues and obligations of providing therapy, including informed consent, written contract, and confidentiality.
6. be familiar with the types of situations in which professionals providing services to individuals with IDD manage ethical conflicts.
7. develop a problem-solving approach to solving ethical dilemmas.
8. Students will apply ethical issues to a recent case impacting a child with a developmental disability.
9. be familiar with a broad array of ethical issues within academia, especially within research.
10. develop analytic tools for anticipating, understanding, resolving, minimizing, or circumventing ethical conflicts likely to arise in their research.
11. explore ethical decision making in a forensic setting.
12. discern the differences among sleazy behavior, bad form, illegal actions, and unethical conduct.

Course Requirements:

Class sessions will be highly interactive. Students are expected to come prepared to discuss assigned readings and offer opinions on issues discussed. Active learning strategies and small group work will be incorporated into the class. Because of the interactive format, your attendance and contributions are important. No credit can be given if you miss an in-class activity.

Course Format:

The course format will include a combination of lecture, class discussion, group learning activities, and individual learning activities. The course syllabus, lecture material, handouts, quizzes, and some reading materials are accessible in Carmen format. Each student is required to visit this Carmen course site at least once/weekly to read lecture material, complete required quizzes, access required readings, and review any messages posted by the course instructor. Please contact the course instructor on the first day of class if assistance is needed accessing the Carmen course information.
Required Texts: See Class Schedule for assigned chapters and articles


Course Grading:
The following grading system will be used:

- **A** 93+  
- **A-** 90-92  
- **B+** 87-89  
- **B** 84-86  
- **B-** 80-83  
- **C+** 77-79  
- **C** 74-76  
- **C-** 70-73  
- **D+** 67-69  
- **D** 64-66  
- **E** <64

Academic Integrity
“It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct [http://studentlife.osu.edu/pdfs/csc_12-31-07.pdf](http://studentlife.osu.edu/pdfs/csc_12-31-07.pdf).”

A faculty member who suspects that a student has committed academic misconduct is obligated by University Rules to report the student to COAM. If COAM finds that the student violated the code, then sanctions could include a failing grade and suspension or dismissal from the university.

Grades will be based on:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes: 2 @ 10 points each</td>
<td>20</td>
</tr>
<tr>
<td>Class presentations</td>
<td>40</td>
</tr>
<tr>
<td>Contribution to class discussion</td>
<td>30</td>
</tr>
<tr>
<td>Final Exam</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

Carmen Quizzes:
Students will be required to complete a total of 2 quizzes during the course of the quarter in Carmen. The purpose of the quizzes includes testing of knowledge gained from required readings and certain independent learning activities. Specific quiz due dates and topics are included in this syllabus. *There will be a maximum of 50% credit for quizzes submitted late.* A score of zero will be assigned to quizzes that are not completed.
Class presentations:
Students will identify and present an issue to the class that related to one of the ethical principles discussed in class and that pertains to people with intellectual and developmental disabilities. Issues may be selected from current local, national, or international events or may be issues that involve the students personally.

Contribution to class discussion:
For full participation credit, students will contribute more than once during each class. Comments will be insightful, constructive, and balanced between general impressions, opinions, and specific thoughtful criticism or contributions. Finally, students are expected to listen attentively when others share as indicated by comments that build on others’ remarks.

Final Exam:
The final exam will be a comprehensive test of knowledge gained from required readings, class discussion, and independent learning activities. Students will complete the multiple choice exam in Carmen.

Students with Disabilities

If you have a disability that requires reasonable accommodations in any way, please inform the instructor as soon as possible so that I will be able to provide adequate accommodations.

“Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901; http://www.ods.ohio-state.edu/.”

Class Schedule and Topics:

Week 1 (Meeting date: August 22nd)
Topic: Course overview and review of syllabus. Introduction to Ethics and Professional Issues.
Description: Review of syllabus, assignments, and expectations for class. This will be followed by a discussion of ethics codes and how they are applied.

Objectives: Students will be able to discuss the codes of conduct that guide professional practice in psychology as well as how ethical codes are applied and enforced.
Required Reading:
1. Ethics codes and how they are enforced (Chapter 1), pp. 7-65, Bersoff text.
2. How ethics are applied (Chapter 2), pp. 67-115, Bersoff text.
3. You just don’t understand (Introduction), pp. 3-11; Tiny Tims, Supercrips and the End of Pity (Chapter 1), pp. 12-40 in No Pity (Shapiro, 1993) – posted to Carmen.

Week 2 (Meeting date: August 29th)
Topic: Confidentiality, Privilege, and Privacy
Description: This class will address the fundamental ethical value of confidentiality. Students will discuss confidentiality in the context of research, assessment, and therapy. Secondly, we will address limits to confidentiality with a focus on team structure and function as an integral part of working with people with developmental disabilities. Finally, issues specific to clients with developmental disabilities, their families, and other stakeholders will be discussed.

Objectives: The students will understand the distinctions among privacy, privilege, and confidentiality and be familiar with the confidentiality provisions in the APA Ethics Code.

Required Readings:
1. Confidentiality, Privilege, and Privacy (Chapter 4), pp. 159-213, Bersoff text.
   a. The Concept of Normalization (Chapter 6), pp. 31-33;
   b. Ethical and Legal Problems in Rehabilitation and Medicine (Chapter 7), pp. 35-40;
   c. Basic Legal Aspects in Providing Medical, Educational, Social and Vocational Help to the Mentally Retarded (Chapter 8), pp.41-48

Week 3 (Meeting date: September 5th)
Topic: Multiple Relationships
Description: Beyond sexual impropriety, this class will address the issue of nonmaleficence and the spectrum of questionable relationships that might confront psychologists, regardless of their role and the setting in which they work.

Objectives: Students will understand the principles and ethical guidelines and prohibitions surrounding multiple relationships. Students will participate in a debate of ethical behavior in scenarios likely to come into play in developmental disabilities.

Required Readings:
3. People First (Chapter 6), pp.184-210 in No Pity (Shapiro, 1993)– posted to Carmen.
**Week 4** *(Meeting date: September 12th)*

**Topic: Psychological Assessment**

**Description:** Psychological assessment, including clinical, psycho-educational, and forensic testing comprise a portion of most psychologists’ practice and convey ethical implications. From privacy and consent to dual loyalties, the ethical issues surrounding assessment will be explored. It is the psychologist’s responsibility to ensure that the tests used are psychometrically sound and appropriate. The psychologist must be competent to not only administer but also make valid interpretations. We will address gathering, storing, interpreting, and disseminating information about test takers that is gleaned from assessment. We will not delve into topics of validity, reliability, norming, or standardization of tests except as they relate to ethical and social issues.

**Objectives:** Students will appreciate the ethical issues and obligations of testing, particularly testing to determine eligibility for services.

**Required Readings:**
1. Psychological Assessment (Chapter 6), pp. 271-327, Bersoff text.

**Week 5** *(Meeting date: September 19th)*

**Topic: Therapy and Other Forms of Intervention**

**Description:** Therapeutic relationships are unique in the level of intimacy expected and in the speed at which intimacy is reached. Usually, people enter therapy only after considerable worry and rumination. As painful as they find their situation or symptoms, they have grave reservations about the therapy process. Usually, they enter therapy voluntarily. When clients are deeply conflicted or compelled to see a psychologist, they may be anxious, needy, and vulnerable—maybe even hostile and negative toward the therapy process. Consider the client with intellectual disability who is less likely to self-refer and who may not have information about therapy. We will discuss ethical issues surrounding therapy, including informed consent, suicide, and risk management.

**Objectives:** Students will appreciate the ethical issues and obligations of providing therapy, including informed consent, written contract, and confidentiality.

**Required Readings:**
1. Therapy and Other Forms of Intervention (Chapter 7), pp. 329-383, Bersoff text.
2. Ethical Issues in Counseling Clients with Disabilities (Chapter 13), pp. 289-301 in *Psychotherapy for Individuals with Intellectual Disability* (Fletcher, 2011)– posted to *Carmen*. 

QUIZ #1 DUE September 20, 2017 MIDNIGHT

**Week 6** *(Meeting date: September 26th)*

**Topic: The Business of Psychology - Beth McCreary, PhD, guest lecture**

**Description:** The logistics of doing professional psychology no longer simply involves renting an office; buying an oriental rug, an aquarium, and comfortable couches and chairs; and exercising independent professional discretion. Psychology is a business. Psychologists are no longer therapists or doctors; they are health service providers (or worse yet, vendors). Those who receive treatment are no longer patients or clients; they are consumers of psychological services. Not to mention the threat of a malpractice claim. This changing world of psychology confronts the concerned clinician with an array of ethical issues.

**Objectives:**
- Students will discern the differences among sleazy behavior, bad form, illegal actions, and unethical conduct.

**Required Readings:**
1. The Business of Psychology (Chapter 10, pp. 531-579), Bersoff text.

**Week 7** *(Meeting date: October 3rd)*

**Topic: Learning Ethics and Behaving in an Ethical Manner**

**Description:** Since the 1970s every accredited graduate program training professional psychologists is required to offer instruction in ethics yet ethical violations persist. In some cases, psychologists attempt to comply with the rules but rely on their own faulty interpretation of the rules. Caring for individuals with intellectual disabilities presents complex situations that present ethically sensitive and knowledgeable psychologists with fundamental and profound ethical dilemmas. Psychologists may understand the APA Ethics Code but violate them because they consider violation to be in the service of higher moral principles. The psychologist who wishes to act ethically in an ethically uncertain world needs to have both a philosophical base from which to make decisions and a method for using that base to build workable options.

**Objective:**
- Students will develop a problem-solving approach to solving ethical dilemmas.

**Required Readings:**
4. “National Register Graduate Student Corner: Disability and Accessibility: Ethical Implications” (http://www.e-psychologist.org/index.iml?mdl=exam/show_article.mdl&Material_ID=97) – posted to Carmen

Week 8 (Meeting date: October 10th)
Topic: Ethics in Research, teaching, and supervision
Description: Science and the public are becoming increasingly aware that academia does not insulate one from the unethical behavior. People now know that for more than 60 years, academic scientists working for the federal government engaged in risky research that proved harmful to participants, who were never fully informed about the nature, costs, and benefits of the studies. It has also been acknowledged that professors sometimes do appropriate students’ ideas and works as their own; that teachers and supervisors develop intimate, sometimes sexual, relations with students and trainees; and that some teachers are often unprepared to face their classes or leave students languishing for months before returning examinations or seminar papers. These issues have become so salient that for the first time in nine revisions, the current (2002) set of APA Ethical Principles contains two sections of standards (Section 7- Training) and Section 8- Research and Publications.

Objectives: Students will be familiar with a broad array of ethical issues within academia, especially within teaching.

Required Readings:
2. “Regulatory and ethical principles in research involving children and individuals with developmental disabilities,” (Yan & Munir, 2004)—posted to Carmen.

Week 9 (Meeting date: October 17th)
Topic: Ethics in Research with Human Participants
Description: This session will address ethical codes published by the office for protection from Research Risks. We will discuss examples to help the student understand the issues and lessons. The intent of this topic is to raise the student’s consciousness, not to preempt their own ethical analyses of dilemmas. Responsible decision-making is always predicated on the competence and expertise of the researcher making the decisions.

Objectives:
- Students will develop analytic tools for anticipating, understanding, resolving, minimizing, or circumventing ethical conflicts likely to arise in their research.

Required Readings:
1. Ethics in Research with Human Participants (Part I, pp. 3-57), in Sales & Folkman text.

**Week 10 (Meeting date: October 24th)**

**Topic: Ethics in Research with Human Participants, part 2**

**Description:** This session will address ethical codes published by the office for protection from Research Risks. We will discuss examples to help the student understand the issues and lessons. The intent of this topic is to raise the student’s consciousness, not to preempt their own ethical analyses of dilemmas. Responsible decision-making is always predicated on the competence and expertise of the researcher making the decisions.

**Objectives:**
- This session will provide students with analytic tools for anticipating, understanding, resolving, minimizing, or circumventing ethical conflicts likely to arise in their research.

**Required Readings:**
1. Ethics in Research with Human Participants (Parts II and III, pp. 61-128), Sales & Folkman text.

**QUIZ #2 DUE October 25, 2017 MIDNIGHT**

**Week 11 (Meeting date: October 31st)**

**Topic: Ethical Issues in Professional Practice in the field of Developmental Disabilities – Dr Betsey Benson, guest lecture**

**Description:** Professional practice in the field of IDD can present differing sources of conflict between professional codes of practice and the reality of providing services to individuals who may be dependent on others. In this session, we will examine the nature of the ethical conflicts reported by IDD professionals to professional standards committees and the effects of managing ethical conflicts on the professional. We will also consider how differing views of ethical practice can affect the implementation of effective treatments.

**Objective:** Students will be familiar with the types of situations in which professionals providing services to individuals with IDD manage ethical conflicts.

**Required Readings:**

**Week 12 (Meeting date: November 7th)**

**Topic: Unique Ethical Dilemmas in Developmental Disabilities**

**Description:** Discussion will focus on the unique ethical questions and difficulties relevant to the field of developmental disability. Students will debate the ethical principles at play in the growing interest in planned communities

**Objectives:**

- Students will apply ethical principles and problem-focused ethical decision making to a recent zeitgeist in the field of developmental disability.

**Required Readings** (all saved in Carmen):


**Week 13 (Meeting date: November 14th)**

**Topic: Current Issues in the field of Intellectual and Developmental Disability**

**Description:** Students will identify and present an issue to the class that related to one of the ethical principles discussed in class and that pertains to people with intellectual and developmental disabilities. Issues can pertain to current local, national, or international events or may be issues that involve the students personally. Presenters will share 1-2 articles with the class and submit a 2-page summary of their issue and its relevance to ethical principles. Electronic copies of articles should be sent one week before the presentation to the class. Summaries are due in class the day the material is presented.
Objectives: Students will apply ethical principles to a current situation or case involving people with intellectual and developmental disabilities and discuss.

Required Readings:
1. Students will share with class 1-2 articles related to topic 1 week before presentation

Week 14 (Meeting date: November 21th)
Topic: Current Issues in the field of Intellectual and Developmental Disability
Description: Presentations from the previous week will continue. Students will identify and present an issue to the class that related to one of the ethical principles discussed in class and that pertains to people with intellectual and developmental disabilities. Issues can pertain to current local, national, or international events or may be issues that involve the students personally. Presenters will share 1-2 articles with the class and submit a 2-page summary of their issue and its relevance to ethical principles. Electronic copies of articles should be sent one week before the presentation to the class. Summaries are due in class the day the material is presented.

Objectives: Students will apply ethical principles to a current situation or case involving people with intellectual and developmental disabilities and discuss.

Required Readings:
1. Students will share with class 1-2 articles related to topic 1 week before presentation

Week 15 (Meeting date: November 28th)
Topic: Forensic Settings – Marc Tassé, guest lecture
Description: Psychologists are often called upon to provide the criminal and civil court system useful expert information in order to inform decisions by judges and juries about human behavior. It is not only forensic psychologists who become involved with the law. Every psychologist- whether clinician scientist, or academician – is a potential expert witness and each must be prepared to interact with the legal system. Psychologists, whatever their training, may wish to inform legislative or regulatory bodies about pending enactments or to lobby for a certain measure. The psychologists’ part in each of these scenarios is guided by ethical considerations. Although lawyers are obligated to champion their clients’ causes through zealous and unbridled representation, different ethical imperatives may guide the behavior of psychologists who enter the hallowed halls of the law. We will address the “Atkins case” scenario where the Supreme Court decision that determined defendants with intellectual disability in capital cases would not face the death penalty.

Objectives:
• This session will examine the dimensions of ethical decision making in a forensic setting.

Required Readings:
1. Forensic Settings (Chapter 9, pp. 453-530), Bersoff text
3. “Professional Issues in Atkins Assessments” (Gilbert, Cunningham, & Tassé, 2015)—posted to Carmen.

**Week 16 (Meeting date: December 5th)**

**Week 17 (Final Exam): Wednesday December 13th 4-5:45pm**

**FINAL EXAM DUE in Carmen**

**Reference List for Books, Book Chapters, and Articles for This Course**


The Ohio State University

HTHRHSC 7717 (cross-listed course)
Interdisciplinary Perspectives on Developmental Disabilities

Autumn Semester 2017

Credit: 3 credit hours
Location: Room 230 McCampbell Hall
Time: Monday 4:00 p.m. – 6:48 p.m.
Instructors: Luc Lecavalier, PhD ● email: luc.lecavalier@osumc.edu
Marc J. Tassé PhD ● email: marc.tasse@osumc.edu
T.A. Dana Kamara ● email: dana.kamara@osumc.edu
Office Hours: By appointment; 357 McCampbell Hall ● please contact either of us via email.

Guest Presenters: Dawn Allain, MS, CGC; Tom Fish, PhD; Susan M. Havercamp, PhD; Betsey Benson, PhD; Margo Izzo, PhD.; Paula Rabidoux, PhD, CCC; Karen Ratliff-Schaub, MD; Katie Walton, PhD, Andrea Witwer, PhD.

Students with disabilities are responsible for making their needs known to the instructor and seeking available assistance in a timely manner. This syllabus and all instructional materials of this course can be provided in alternative formats upon request. Please contact Luc Lecavalier, PhD at email: luc.lecavalier@osumc.edu.

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see: Code of Student Conduct [http://studentlife.osu.edu/pdfs/csc_12-31-07.pdf].

Course Description

According to the Developmental Disabilities Act, section 102(8), the term "developmental disability" means a severe, chronic disability of an individual 5 years of age or older that:

1. Is attributable to a mental or physical impairment or combination of mental and physical impairments;
2. Is manifested before the individual attains age 22;
3. Is likely to continue indefinitely;
4. Results in substantial functional limitations in three or more of the following areas of major life activity:
   i. Self-care
   ii. Receptive and expressive language
   iii. Learning
   iv. Mobility
   v. Self-direction
   vi. Capacity for independent living
vii. Economic self-sufficiency

5. Reflects the individual’s need for a combination and sequence of special, interdisciplinary, or generic services, supports, or other assistance that is of lifelong or extended duration and is individually planned and coordinated, except that such term, when applied to infants and young children means individuals from birth to age 5, inclusive, who have substantial developmental delay or specific congenital or acquired conditions with a high probability of resulting in developmental disabilities if services are not provided.

People with developmental disabilities may have one of many diagnoses that could include intellectual disability, autism spectrum disorders, cerebral palsy, Down syndrome, developmental delay, spina bifida, muscular dystrophy, and others. In the past, these individuals were outcast, ignored, or ridiculed by people with and without disabilities and were often abandoned even by their own families. Political activism during the 1960s and interest group advocacy led to a series of federal legislation that have radically altered the life opportunities of persons with developmental disabilities and the way they are perceived by society. Parents, advocates, consumers, and professionals have played a critical role in this historical process. This course has been designed as an advanced overview course in developmental disabilities for graduate students from a broad spectrum of academic disciplines who are planning a leadership career in the field of disabilities. It is also applicable for community professionals seeking continuing education credits.

The course will be team-taught by an interdisciplinary group of faculty from across Ohio State and Nationwide Children’s Hospital. A focus of this course will be to demonstrate the complexity of developmental disabilities and the resulting need for an interdisciplinary perspective in understanding, preventing and providing supports and services to persons with developmental disabilities. Individual class sessions will adopt different formats of presentation depending on the presenter and the topic. Integration of the topics across sessions will occur through written assignments and formal and informal discussions during each class period.

Course Objectives

By the conclusion of the course, each student will be able to:

- Demonstrate an understanding of etiology, diagnosis, medical risk factors, epidemiology, and prevention and treatment associated with developmental disabilities.
- Demonstrate an understanding of the psychosocial aspects of developmental disabilities, including assessment of intellectual disability, autism spectrum disorders, psychopathology in persons with developmental disabilities, and early intervention.
- Explain the similarities and differences in professional roles and analyze his/her discipline’s role in the area of developmental disabilities.
- Demonstrate an understanding of team development and functioning and its role in developmental disabilities.
- Evaluate components of effective interdisciplinary teams, particularly in the areas of communication, leadership, decision-making, and conflict management.
- Discuss relevant legislation, legal issues, consumer rights associated with persons with developmental disabilities, and basic ethical principles.
- Discuss community programs, services, and support systems for persons with developmental disabilities.
• Demonstrate a basic understanding of person- and family-centered intervention.
• Demonstrate a basic understanding of self-determination and self-advocacy and also transitions within the educational setting and through different life phases and how these issues impact a person with a disability and their family.
• Demonstrate an understanding of diversity and its importance in developmental disabilities.

Course Requirements
Students are expected to attend class regularly, complete all assignments, and come to class prepared to discuss the assigned readings and actively participate in learning activities. Because of the interactive format, your attendance and contributions are important.

Course Format
The course format will include a combination of lecture, class discussion, group learning activities, and individual learning activities. The course syllabus, lecture material, handouts, and some reading materials are accessible in Carmen format. Each student is required to visit the Carmen/Canvas course site at least weekly to print lecture materials, access required readings, and review any messages posted by the course instructor. It is expected that all students will read all materials prior to class.

Please contact the course instructor on the first day of class if assistance is needed accessing the course information found on Carmen/Canvas.

Required Text (available for purchase at campus Barnes & Noble bookstore)


Selected chapters are required reading – see class schedule for assigned chapters. Additional reading will be required to complement chapters and course lectures.

Course Grading
The following grading system will be used:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>93+</td>
</tr>
<tr>
<td>A-</td>
<td>90-92</td>
</tr>
<tr>
<td>B</td>
<td>87-89</td>
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<td>80-83</td>
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<td>D</td>
<td>67-69</td>
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<tr>
<td>D-</td>
<td>64-66</td>
</tr>
<tr>
<td>E</td>
<td>&lt;64</td>
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</tbody>
</table>

Grades will be based on:
Debate Presentation (20 points)

Each student will be required to prepare and present a debate as a part of a small group (4 to 6 students). Topics and groups will be assigned on the first day of class. Each group will be divided into 2 smaller subgroups (2 - 3 students per subgroup) to allow for students to present 2 opposing perspectives. **Each presentation will be limited to 20 minutes.** The purpose of this assignment is to present evidence supporting one perspective of a controversial topic/issue in DD. Each subgroup will be required to cite information from a minimum of 5 references; references should be from peer-reviewed journals. Potential debate topics include: banning the R-word, vaccines as a cause of autism, labeling, sterilization, plastic surgery to correct dysmorphic features, planned communities, and others.

Mid-Term Exam (40 points)

The mid-term exam will cover the first half of the semester (approximately first 6 weeks) of lectures, readings, and course material. The exam will consist of short answers and multiple choice items. The mid-term exam will be taken in class during week 7.

End-of-Term Exam (40 points)

The end-of-term exam will cover the second half of the semester (approximately last 6 weeks) of lectures, readings, and course material. The end-of-term exam will consist of short answers and multiple choice items. The end-of-term exam will be taken in class during week 14.

**SUMMARY OF ASSIGNMENTS**

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Date</th>
</tr>
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<tbody>
<tr>
<td>Mid-Term Exam</td>
<td>October 16th</td>
</tr>
<tr>
<td>Debate Presentation</td>
<td>October 16th</td>
</tr>
<tr>
<td>Final Exam</td>
<td>December 4th</td>
</tr>
</tbody>
</table>

**Class Schedule and Topics**

**Week 1 – August 28, 2017**

**Topic:** Course overview and review of syllabus. Introduction to Developmental Disabilities.

**Presenters:** Marc J. Tassé, PhD

**Description:** Review of syllabus, assignments, and expectations for class. This will be followed by a presentation on the definition of developmental disabilities, brief history and overview of intellectual and developmental disabilities.

**Objectives:** Students should have a good understanding of: basic epidemiological information, definition and diagnostic criteria of developmental disabilities and intellectual disability, best practices in assessment, federal legislation associated with UCEDD, DD Council, and P&A network.
Required Reading:
1. Chapter 25. Introduction to intellectual and developmental disabilities (pp. 357-372).
2. Supplemental readings (see Carmen website to download): (1) DD Act PL 106-402; (2) Chapter 1 of Schalock et al. (2010).

September 4, 2017: LABOR DAY – No Class / Campus Closed

Week 2 – September 11, 2017
Topic: Autism Spectrum Disorder
Presenter: Luc Lecavalier, PhD
Description: Overview of autism spectrum disorders: history, causes, major controversies, diagnosis, and best practice intervention recommendations.
Objectives: Students will know the core symptoms associated with autism spectrum disorders, understand the distinction between the different types of autism, know the best practices in the diagnostic/assessment procedures and intervention strategies.
Required Reading:

Week 3 – September 18, 2017
Topic: Behavior Supports
Presenter: Andrea Witwer, PhD
Objectives: Students will know the different possible functions of problem behavior. Students will be able to describe the elements of functional behavior assessment and identify possible intervention strategies based on the function of the behavior.
Required Readings:
1. Chapter 28: Behavioral Interventions (pp 401-412)

Week 4 – September 25, 2017
Topic: Genetic and Biological causes of Developmental Disabilities.
Presenter: Dawn Allain, MS, CGC
Description: Overview of genetic principles, discussion of specific genetic and biological causes associated with developmental disabilities, review of specific syndromes.
Objectives: Students should develop an understanding of biological causes of developmental disabilities and of screening techniques and medical prevention.
Required Reading:

2. **SUPPLEMENTAL READING:** Chapter 10. Introduction to genetics, genomics, epigenetics, and intellectual and developmental disabilities (pp. 113-126).

3. **SUPPLEMENTAL READING:** Chapter 13. Factors causing or contributing to intellectual and developmental disabilities (pp. 175-194).


**Week 5 – October 2, 2017**

**Topic:** Communication Disorders and Use of Assistive Technology  
**Presenter:** Paula Rabidoux, PhD, CCC-SLP  
**Description:** Overview of language and speech disorders in persons with developmental disabilities, presentation of assessment and intervention strategies, overview of assistive technology commonly used.  
**Objectives:** Students will learn the procedures and tools used in conducting a speech evaluations, know the best practices in assessment and intervention, understand the role of technology in assistive/augmentative communication.  
**Required Readings:**  
1. Chapter 31. Language and communication assessments and interventions (pp. 447-460).  
2. Chapter 32. Augmentative and alternative communication (pp. 461-474).  

**Week 6 - October 9, 2017**

**Topic:** Health Disparities and Healthcare Promotion  
**Presenter:** Susan M. Havercamp, PhD  
**Description:** Persons with developmental disabilities face numerous barriers to health equity including poor health surveillance data, a paucity of DD training for health care professionals, inadequate access to health care, and few opportunities for accessible health promotion activities. This lecture will review these important issues. We will discuss the *National Core Indicators* and the valuable state-wide and national data on health issues faced by persons with DD. We will discuss best practices in educational trainings to health care professionals and how these interventions can improve quality of care. We will also present existing evidence-based health promotion materials. Health inequalities in persons with DD are complex and hence require a correspondingly thorough and multi-discipline solution  
**Objectives:** The students will have an understanding of the existing health issues of persons with DD, know what is National Core Indicators survey, and be able to recall the research on health disparities and issues related to problems with access to healthcare.
Required Readings:
1. Chapter 46. Physical health (pp. 655-678).

Week 7 – October 16, 2017
- Mid-Term Exam (first half of class – 4:00 – 5:15pm) & Debate Presentations
- Debate Presentations are in SMALL GROUPS (second half of class – 5:30 – 6:48pm).
  Groups will be determined by course instructor and announced at WEEK 2.

Week 8 – October 23, 2017
Topic: Understanding, Supporting, and Involving Families
Presenters: Tom Fish, PhD
Description: This presentation will include a discussion of family systems, theory of the grieving process, importance of family involvement, and family support. This presentation will empower trainees to feel more confident about their approaches toward engaging families. We will discuss a variety of strategies that can be used in this regard. Additionally, we will discuss the importance of supporting family advocacy and family-centered care.

Objectives:
1. Improved understanding of family adjustment to having a child with a disability
2. Increased awareness of the various roles families play in the lives of the children with disabilities throughout the life cycle.
3. Students will have a greater understanding of family-centered care and the rationale for such.
4. Students will understand how critically important family advocacy has been and continues to be for families with a child with a disability.

Required Readings:
1. Chapter 40: Providing support that enhances a family's quality of life (pp. 583-596).
2. PACER Center: Champions for Children with Disabilities [www.pacer.org](http://www.pacer.org)
3. Cincinnati Children's [www.cincinnatichildrens.org/patients/care/family-centered](http://www.cincinnatichildrens.org/patients/care/family-centered)

Week 9 – October 30, 2017
Topic: Understanding, Supporting, and Involving Siblings
Presenter: Tom Fish, PhD
Description: This presentation will provide an understanding of the important roles that siblings both can and often do play in the lives of their brothers and sisters with disabilities. A variety of support and advocacy programs will be presented. How professionals can reach out to and support siblings will also be addressed.

Objectives:
1. Better understanding of sibling strengths and needs
2. Insight into how to support and engage siblings
Required Readings:

Week 10 – November 6, 2017
Topic: Transition from School to Adult Life
Presenter: Margo Izzo, PhD
Description: This class will focus on the interdisciplinary nature of the IEP team that is designated to develop an appropriate educational program for students with disabilities served through public education programs. The IEP process, as mandated by IDEA of 2004, will be reviewed and discussed. Students will gain an appreciation of the unique and overlapping skills of members of the interdisciplinary team. Strategies to promote self-determination and self-advocacy prior to graduating from a high school environment will be identified. Common procedures for processing documentation and approving accommodations will be discussed. The use of interdisciplinary teams within the adult system will be discussed as adults with disabilities navigate the program-centered systems.
Objectives: Students will compare and contrast the concepts of self-determination, self-advocacy and disclosure and discuss strategies to promote self-determination among high school and college students with disabilities and adult consumers. Students will describe the process of developing the summary of performance (SOP), as required by IDEA, in a student-centered manner. This session discuss the rights and responsibilities of students with disabilities enrolled in postsecondary education programs.
Required Readings:
1. Chapter 37. The transition from school to adult life (pp. 541-556).
2. Chapter 38. Work and employment for people with intellectual and developmental disabilities (pp. 557-568).

Consult these two Internet Resources:
=> www.thinkcollege.net (watch at least one video – under the training tab)
=> http://transitionta.org/effectivepractices (review the evidence-based Practices Tab).

Week 11: November 13, 2017
Topic: Interdisciplinary Teams
Presenter: Karen Ratliff-Schaub, MD
Description: This class will focus on team structure and function as an integral part of working with people with developmental disabilities. Many professionals consider interdisciplinary teams a necessity for the comprehensive treatment of persons with developmental disabilities. Students will develop an understanding of various types of team structures, of the history of interdisciplinary teams, and of the dynamics of effective teams. Information on theory and practice will be provided as well as specific information on Communication and Leadership. Active learning strategies will be utilized in addition to lecture materials.
Objectives: The students will be able to recognize the need and benefits of a team approach to working with people with developmental disabilities, understand theories of team development, explain similarities and differences among various types of teams, recognize components of effective teams, and identify components of effective communication, leadership, decision-making, and conflict management.
Required Readings:

**Week 12 – November 20, 2017**  
**Topic: Co-occurrence of Psychopathology**  
**Presenter:** Betsey Benson, PhD  
**Description:** This class will focus on the psychiatric disorders and problem behaviors in persons with DD and its prevalence, assessment, and intervention.  
**Objectives:** Students will be introduced to the assessment of psychopathology, adaptations/differences in clinical presentation, assessment, and use of medication to treat mental illness in persons with DD and other treatments in persons with DD, students will be introduced to the Diagnostic Manual for Persons with Intellectual Disability (DM-ID).  
**Required Readings:**  
1. Chapter 47. People with intellectual and developmental disabilities and mental health needs (pp. 679-694).

**Supplemental Readings:**  

**Week 13 – November 27, 2017**  
**Topic: Early Intervention/Early Childhood Education**  
**Presenter:** Katie Walton, PhD  
**Description:** Overview of the benefits and best practices in early intervention and evidence-based models in early childhood education, presentation of some models of interventions and the data associated with outcomes in child’s development.  
**Objectives:** Students should have a good understanding of the important elements of early intervention and early childhood education, good grasp of the statistics associated with EI/ECE outcomes, and differentiate between the major EI/ECE models.  
**Required Reading:**  
2. Chapter 34. Early intervention for young children (pp. 495-508).  

**Week 14 – December 4, 2017**  
- Final Exam Room 230 (entire class period: 4:00 – 6:48pm).
PSYCH 7840 Syllabus

Practicum in Intellectual and Developmental Disability Psychology

Instructor: Andrea Witwer, PhD
Office: 371 McCampbell Hall
Telephone: 614-685-8721
Email: andrea.witwer@osumc.edu

Description:

IDD psychology students are introduced to practicum experiences while closely supervised in the in-house Nisonger Clinics for 3 semesters. They are placed in the following: Interdisciplinary Developmental Clinic (FDC), School-Age Autism Developmental Clinic (SADC), and/or Transition-age Autism Developmental Clinic. This practicum is required of second year IDD students and can be available for more advanced students seeking additional practice or for those who require further skills development.

- Each Clinic case will have at most
  - 1 novice student (assisting and learning assessments)
  - 1 advanced student (conducting interview, working with novice student to administer assessments, and writing reports)
- Faculty (licensed psychologist) and/or Postdoctoral Fellows supervised by faculty will be directly involved in case, modeling assessment or observing and providing on-going feedback.

Topical Outline:

- Students will obtain follow competency before advancing:
  - ADOS
    - Consensus Coding 80% agreement on Modules 1-3
    - Fidelity in administration rated by supervisor according to UMACC Fidelity Checklist
    - Independent Administration and Interpretation
  - Developmental Assessment (Bayley, Mullen)
    - Read Manual
    - Observe Administration and assist in material management
    - Administer with assistance in materials management
    - Independent Administration and Interpretations
  - Intelligence Testing (Stanford Binet, WISC)
    - Read Manual and Interpretation guidelines
    - Observe Administration and assist in material management
    - Independent Administration and Interpretations
  - Achievement Testing (Woodcock Johnson and WIAT-III)
    - Read Manual and Interpretation guidelines
    - Observe Administration and assist in material management
    - Independent Administration and Interpretations
  - Adaptive Behavior (ABAS-II, Vineland)
- Read Manual and Interpretation guidelines
- Independent Administration and Interpretations
  - Psychopathology/Behavioral Assessments (CBCL, NCBRF, P-ChIPS etc)
    - Read Manual and Interpretation guidelines
    - Independent Administration and Interpretations
  - Conduct Psychological Interview
    - Provide Comprehensive Feedback to Family/Client
      - Feedback will first be with supervisor in room, then progress to remote observation
      - Trainee should be able to give feedback independently before completing practicum
  - Write Comprehensive Report including recommendations
    - Reports must be completed within deadlines
    - Reports should be written at professional level
  - Complete adequate case preparation
    - be able to complete case review
    - have reviewed and be familiar with tests to be administered
    - prepare all of clinic environment so that it is appropriate in appearance and in items available in room for client.

Supervision:

- Weekly 1 hour group supervision with licensed psychologists, other graduate students and postdoctoral fellows. Group supervision will consist of 30 minutes of didactics regarding assessment and 30 minutes of case review. Students will be expected to review test or other reading material which will be discussed.
- 1:1 Supervision during assessment for Clinics via real-time observation and debriefing meeting afterward with be provided by licensed supervisor and postdoctoral fellows
- Recorded sessions for more advanced trainees that can be reviewed during weekly 1:1 supervision meetings

Grading:

Satisfactory/Unsatisfactory. Trainees will be rated quarterly on progression toward competency (see Quarterly Competency Rating Form). A mid-semester meeting will be scheduled to discuss progress. If a student fails to reach competency at the end of their rotation they will meet with the faculty to determine what additional experience is necessary prior to promotion to additional practicum sites.

All students receiving an 80% or higher will earn a grade of Satisfactory. All those below 80% will earn a grade of Unsatisfactory. Grading will be determined based on the following:

Meeting Written Deadlines (40%)

Trainees must meet the following expectations:

1. Review the chart prior to the appointment and provide a typed chart review to the supervising psychologist prior to group supervision. Present chart, including all scored instruments during team
meeting. This should all be done prior to the meeting. Attend the thirty minute “team” conference which occurs on the day of the appointment in its entirety. Trainees should already have necessary parent/teacher report forms pulled (e.g., CBCL/TRF, etc.), scored and ready to take into the intake interview.

2. Following the intake interview and testing at the first appointment, the trainee needs to have the background history section of the report and autism criteria/ADOS sections completed no later than one week after the initial appointment (e.g., if you see a Thursday PM case, your supervisor needs to see the above draft via email by 5pm the following Thursday.

3. After follow up testing, the trainee needs to have all protocols scored and available at the following week group supervision meeting. (e.g., if you test on a Thursday, you need to show your supervisor scored protocols by Tuesday group supervision the next week).

4. After follow up testing, the trainee will have a draft of the report to the supervisor within one week of testing (e.g., if you test on a Thursday, the supervisor needs the report by the following Thursday at 5pm).

5. Any subsequent edits to the report need to be completed within three business days of having received the edits (e.g., if you get a report back on a Tuesday, the supervisor needs the report back by 5pm on Friday).

- If a trainee fails to meet any of these deadlines more than once, a performance improvement plan will be implemented and placed in the trainee’s file.
- Students will be graded weekly on these 5 expectations, receiving 20 points each (i.e., 100 points per week).

Attendance (20%)

Attendance:
Students are expected to attend all clinics during the semester in which they are enrolled-finals week will be used to finalize any outstanding reports. Student absences will be excused for conference attendance and illness. All others excuses will be reviewed on a case-by-case basis. Personal vacations should be scheduled during Breaks, not during the quarter/semester. One unexcused absence will result in earning 80 out of 100 total attendance points. Twenty points will be deducted for each subsequent unexcused absence.

Preparation (20%):

- Students are expected to have interview template and all interview questions printed prior to the team meeting on the day of clinic.
- All planned assessments (as discussed during group supervision) should be reviewed/practiced prior to the appointment.
- The day of the appointment, all planned assessments should be pulled (including protocols). If you are observing, a copy for you to reference should be copied prior to the appointment.
• Students are expected to be ready to talk about the previous week’s client as well as the upcoming client. This includes having all protocols scored and available at supervision.
• Students will be graded weekly on these 4 expectations, which equate to 100 points per week.

Written reflection (20%)
• Students will be assigned written reflections throughout the semester, worth 10 points each. Topics will vary from observations of specific assessments, both administered by themselves and other. Once appropriate they will watch themselves on video conducting interviews, assessments and feedback and write reflections.
• All reflections are due 24 hours prior to group supervision.

Clinical Competency
Students will also be rated each semester in regard to clinical competency. These become part of their record and will be shared with licensing boards as requested.

QUARTERLY COMPETENCY RATING FORM-NISONGER

Select the column corresponding to the training level of the person being assessed, and rate items in that column using the following frequency scale:

• 0: Never/Rarely
• 1: Sometimes
• 2: Often
• 3: Almost Always
• 4: Always

If you have not had the opportunity to observe a behavior in question, please indicate this by circling “No Opportunity to Observe” [N/O].

Near the end of the rating form, you will have the opportunity to provide a narrative evaluation of the trainee’s current level of competence.

FOUNDATIONAL COMPETENCIES

I. PROFESSIONALISM

1. Professional Values and Attitudes: as evidenced in behavior and comportment that reflect the values and attitudes of psychology.

• Understands professional values; honest, responsible
• Adherence to professional values; recognizes situations that challenge adherence to professional values

1B. Deportment

• Understands how to conduct oneself in a professional manner
• Communication and physical conduct (including attire) is professionally appropriate, across different settings

1C. Accountability

• Accountable and reliable
• Accepts responsibility for own actions

1D. Concern for the Welfare of Others

• Demonstrates awareness of the need to uphold and protect the welfare of others
• Acts to understand and safeguard the welfare of others

1E. Professional Identity

• Demonstrates beginning understanding of self as professional
• Displays emerging professional identity; uses resources (e.g., supervision, literature) for professional development

2. Individual and Cultural Diversity: Awareness, sensitivity and skills in working professionally with diverse individuals, groups and communities who represent various cultural and personal background and characteristics defined broadly and consistent with APA policy.

2A. Self as Shaped by Individual and Cultural Diversity (e.g., cultural, individual, and role differences, including those based on age, gender, gender identity, race, ethnicity, culture, national origin, religion, sexual orientation, disability, language, and socioeconomic status) and Context

• Demonstrates knowledge, awareness, and understanding of one’s own dimensions of diversity and attitudes towards diverse others
• Monitors and applies knowledge of self as a cultural being in assessment, treatment, and consultation

2B. Others as Shaped by Individual and Cultural Diversity and Context

• Demonstrates knowledge, awareness, and understanding of other individuals as cultural beings
• Applies knowledge of others as cultural beings in assessment, treatment, and consultation

2C. Interaction of Self and Others as Shaped by Individual and Cultural Diversity and Context

• Demonstrates knowledge, awareness, and understanding of interactions between self and diverse others
3A. Knowledge of Ethical, Legal and Professional Standards and Guidelines

- Demonstrates basic knowledge of the principles of the APA Ethical Principles and Code of Conduct [ethical practice and basic skills in ethical decision making]; demonstrates beginning level knowledge of legal and regulatory issues in the practice of psychology that apply to practice while placed at practicum setting
- Demonstrates intermediate level knowledge and understanding of the APA Ethical Principles and Code of Conduct and other relevant ethical/professional codes, standards and guidelines, laws, statutes, rules, and regulations

3B. Awareness and Application of Ethical Decision Making

- Demonstrates awareness of the importance of applying an ethical decision model to practice
- Demonstrates knowledge and application of an ethical decision-making model; applies relevant elements of ethical decision making to a dilemma

3C. Ethical Conduct

- Displays ethical attitudes and values
- Integrates own moral principles/ethical values in professional conduct

4. Reflective Practice/Self-Assessment/Self-Care: Practice conducted with personal and professional self-awareness and reflection; with awareness of competencies; with appropriate self-care.

4A. Reflective Practice

- Displays basic mindfulness and self-awareness; displays basic reflectivity regarding professional practice (reflection-on-action)
- Displays broadened self-awareness; utilizes self-monitoring; displays reflectivity regarding professional practice (reflection-on-action); uses resources to enhance reflectivity; demonstrates elements of reflection-in-action

4D. Participation in Supervision Process

- Demonstrates straightforward, truthful, and respectful communication in supervisory relationship
- Effectively participates in supervision

II. RELATIONAL

5. Relationships: Relate effectively and meaningfully with individuals, groups, and/or communities.
5A. Interpersonal Relationships

- Displays interpersonal skills
- Forms and maintains productive and respectful relationships with clients, peers/colleagues, supervisors and professionals from other disciplines

5B. Affective Skills

- Displays affective skills
- Negotiates differences and handles conflict satisfactorily; provides effective feedback to others and receives feedback nondefensively

5C. Expressive Skills

- Communicates ideas, feelings, and information clearly using verbal, nonverbal, and written skills
- Communicates clearly using verbal, nonverbal, and written skills in a professional context; demonstrates clear understanding and use of professional language

FUNCTIONAL COMPETENCIES

IV. APPLICATION

8. Evidence-Based Practice: Integration of research and clinical expertise in the context of patient factors.

- 8A. Knowledge and Application of Evidence-Based Practice
  o Demonstrates basic knowledge of scientific, theoretical, and contextual bases of assessment, intervention and other psychological applications; demonstrates basic knowledge of the value of evidence-based practice and its role in scientific psychology
  o Applies knowledge of evidence-based practice, including empirical bases of assessment, intervention, and other psychological applications, clinical expertise, and client preferences

9. Assessment: Assessment and diagnosis of problems, capabilities and issues associated with individuals, groups, and/or organizations.

- 9B. Knowledge of Assessment Methods
  o Demonstrates basic knowledge of administration and scoring of traditional assessment measures, models and techniques, including clinical interviewing and mental status exam
  o Demonstrates awareness of the strengths and limitations of administration, scoring and interpretation of traditional assessment measures as well as related technological advances

- 9C. Application of Assessment Methods
Demonstrates knowledge of measurement across domains of functioning and practice settings

Selects appropriate assessment measures to answer diagnostic question

**9D. Diagnosis**
- Demonstrates basic knowledge regarding the range of normal and abnormal behavior in the context of stages of human development and diversity
- Applies concepts of normal/abnormal behavior to case formulation and diagnosis in the context of stages of human development and diversity

**9E. Conceptualization and Recommendations**
- Demonstrates basic knowledge of formulating diagnosis and case conceptualization
- Utilizes systematic approaches of gathering data to inform clinical decision-making

**9F. Communication of Assessment Findings**
- Demonstrates awareness of models of report writing and progress notes
- Writes adequate assessment reports and progress notes and communicates assessment findings verbally to client

10. **Intervention**: Interventions designed to alleviate suffering and to promote health and well-being of individuals, groups, and/or organizations.

**10A. Intervention planning**
- Displays basic understanding of the relationship between assessment and intervention
- Formulates and conceptualizes cases and plans interventions utilizing at least one consistent theoretical orientation

**10B. Skills**
- Displays basic helping skills
- Displays clinical skills

**10C. Intervention Implementation**
- Demonstrates basic knowledge of intervention strategies
- Implements evidence-based interventions

**10D. Progress Evaluation**
- Demonstrates basic knowledge of the assessment of intervention progress and outcome
- Evaluates treatment progress and modifies treatment planning as indicated, utilizing established outcome measures

VI. **SYSTEMS**

14. **Interdisciplinary Systems**: Knowledge of key issues and concepts in related disciplines. Identify and interact with professionals in multiple disciplines.

**14A. Knowledge of the Shared and Distinctive Contributions of Other Professions**
- Demonstrates beginning, basic knowledge of the viewpoints and contributions of other professions/professionals
• **14B. Functioning in Multidisciplinary and Interdisciplinary Contexts**
  o Cooperates with others
  o Demonstrates beginning knowledge of strategies that promote interdisciplinary collaboration vs. multidisciplinary functioning

• **14C. Understands how Participation in Interdisciplinary Collaboration/Consultation Enhances Outcomes**
  o Demonstrates knowledge of how participating in interdisciplinary collaboration/consultation can be directed toward shared goals

• **14D. Respectful and Productive Relationships with Individuals from Other Professions**
  o Demonstrates awareness of the benefits of forming collaborative relationships with other professionals
  o Develops and maintains collaborative relationships and respect for other professionals

**Overall Assessment of Trainee’s Current Level of Competence**

Please provide a brief narrative summary of your overall impression of this trainee’s current level of competence. In your narrative, please be sure to address the following questions: What are the trainee’s particular strengths? What are the trainee’s particular weaknesses? How can he/she improve upon these? Do you believe that the trainee has reached the level of competence expected by the program at this point in training?
INTRODUCTION TO BIOLOGICAL PSYCHIATRY

(PSYCH 5613H – SPRING SEMESTER, 2018)

T, Th 12:45 - 2:05   Room 10 Psychology Bldg.

Dr. John P. Bruno
Professor and Chair Dept. of Psychology;
Joint appointments with Neuroscience and Psychiatry
Office: Room 225 Psychology Bldg.
Voice: 2-1770; bruno.1@osu.edu
Office Hrs: by appointment (contact Kevin at mccarthy.232@osu.edu)

***PDFs of Most Readings and All PPTs from Lectures are on CANVAS***

(READING LISTS WILL BE POSTED/DISTRIBUTED AT BEGINNING OF EACH TOPICAL SECTION)

TOPICAL SYLLABUS

<table>
<thead>
<tr>
<th>WEEK</th>
<th>TOPIC TO BE DISCUSSED</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>ESSENTIAL TOPICS IN CONTEMPORARY NEUROSCIENCE</td>
</tr>
<tr>
<td>1</td>
<td>INTRODUCTION TO BIOLOGICAL PSYCHIATRY &amp; ‘RDOC’</td>
</tr>
<tr>
<td>7 TOPICS IN NEUROSCIENCE THAT WE MUST UNDERSTAND BEFORE WE CAN BEGIN! (#1) THE EROSION OF DALE’S LAW AND (#2) RECEPTOR SUBTYPES: INCREASE NEURONAL MESSAGING AT LOW COST</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>(#3) INFORMATION PROCESSING: DIFFERENT TEMPORAL AND SPATIAL SCALES; (#4) VALIDATION OF THE COMPARATIVE METHOD (THE VALUE OF ANIMAL MODELS)</td>
</tr>
<tr>
<td>3</td>
<td>(#5) BEHAVIORS ARE MEDIATED BY DISTRIBUTED NEURAL NETWORKS; (#6) EXAMPLES OF NEUROMODULATION OF SYNAPSES AND NETWORKS; (#7) GLIAL-NEURONAL INTERACTIONS</td>
</tr>
</tbody>
</table>
II. AFFECT REGULATION & MOOD DISORDERS

A. DEPRESSIVE DISORDERS

4. EXAM #1; AFFECTIVE NEUROSCIENCE; SYMPTOMS; DSMV vs RDOC

5. SUBCORTICAL/CORTICAL DYSFUNCTIONS (PATHOPHYSIOLOGY)

6. EXECUTIVE FUNCTION DEFICITS/CURRENT THERAPEUTICS

7. EXPERIMENTAL THERAPEUTICS/QUIZ #1

B. GENERALIZED ANXIETY DISORDER

8. SYMPTOMS; DSMV vs RDOC; PATHOPHYSIOLOGY

9. NEUROBIOLOGY/THERAPEUTICS

III. POST-TRAUMATIC STRESS DISORDER (PTSD)

10. SYMPTOMS; DSMV vs RDOC; PATHOPHYSIOLOGY/QUIZ #2

11. THERAPEUTICS/EXAM #2

IV. SCHIZOPHRENIA

12. SYMPTOMS; DSMV vs RDOC; PATHOPHYSIOLOGY

13. ETIOLOGY; NEURODEVELOPMENTAL HYPOTHESES

14. CURRENT/EXPERIMENTAL THERAPEUTICS/QUIZ #3
Course Objectives:
The purpose of this course is to provide a contemporary survey of our understanding of the biological bases of several significant psychopathologies. The course will highlight four disorders—depression, anxiety disorders, post-traumatic stress disorder (PTSD), and schizophrenia. For each disorder, students will learn the diagnostic classifications, presenting symptomatology, underlying neurobiological dysfunctions, theories regarding etiology, and current and future (experimental) therapeutic strategies. We will directly compare the heuristic leverage provided by the long-time DSM approach with that of the more contemporary RDOC perspective. As appropriate, the utility of animal models for modeling aspects of etiology and potential therapeutics in each of these disorders will also be discussed.

An important goal of this course is to train advanced students to critically read the primary literature. The required readings in this course are complex, written at a high scholarly level and will require a significant effort to process. You will have to devote sufficient time at the beginning of each week to read these articles in preparation for the discussions in class. This is a high level course and the instructor expects that all students will read the material prior to class and come prepared to discuss the readings.

An additional goal of this course is to develop critical thinking and oral/writing skills that are vital to any post-graduate training experience. Thus, the examinations will consist of short written essays or individual oral evaluations focusing on the ability to support or refute hypotheses on the basis of the scientific literature.

Student Evaluation:
There will be three examinations in this course, they will each contribute 25% of the final grade. The exams will be short-essay with an option for an oral final. There will also be three quizzes, each contributing 5% of the final grade. Importantly, the quality of classroom participation will contribute significantly to your final grade (10%). Thus, class attendance and active participation is critical to your success in this course. Rather than assuming that performance in this class will follow a theoretical normal distribution, with 90% = A, 80% = B, etc; the course grades may be curved (higher or lower) depending upon overall class performance.

Graduate students in the class will have an additional requirement; a 3-5 pg paper on psychopathologies not covered in the course. These will be due the first day of the final exam period.
**Required Readings and Power Points:**
The goal of this course is to provide a high-level, contemporary discussion of the scientific literature, thus, each section contains several required journal articles from the primary literature (see preliminary list below). Electronic copies of all articles, not distributed in class, along with color versions of the Power Points used during class, will be available on CANVAS (accessed through https://carmen.osu.edu/) under my name/Spring 2018/H5613.

**Recommended Background Reading:**
Professor Bruno will be happy to recommend (and possibly provide) a few background chapters/texts on neurophysiology, neuroanatomy and psychopharmacology.

**** ADDITIONAL IMPORTANT CLASS POLICIES ****

**Academic Misconduct:** "It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct at http://studentconduct.osu.edu"

Violations of the code in this class will be dealt with according to the procedures detailed in that code. **Specifically, any alleged cases of misconduct will be referred to the Committee on Academic Misconduct.**

**Sexual Misconduct/Relationship Violence:** "Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at http://titleix.osu.edu or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu" AND BY CONTACTING PROFESSOR BRUNO.
Disability Services: Any student who feels that she/he may need an accommodation based on the impact of a disability should contact Professor Bruno (2-1770) privately to discuss her/his specific needs. "Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 098 Baker Hall, 113 W. 12th Avenue; telephone 292-3307, TDD 292-0901, VRS 429-1334; [http://www.ods.ohio-state.edu/]."
PSYCH 6811  
Statistical Methods in Psychology II  
Spring 2018

Lecture : MW 9:35 to 10:55 in PS 35  
Lab : Th 9:35 to 10:55 / 11:10 to 12:30 in PS 22  
Instructor : Dr. Andrew F. Hayes (hayes.338, Lazenby Hall LZ230)  
Teaching Assistants : Jack DiTrapani (ditrapani.4, LZ240d)  
Saemi Park (park.2339, LZ240d)  
Office hours : By appointment, preferably; by happenstance, frequently.

Course Description

Course catalog
Simple linear regression and correlation, multiple linear regression, interactions; introduction to other related methods such as nonlinear regression and random effects models.

Instructor’s description
This course covers an introduction to the analysis of data using the general linear model. Topics include simple and multiple linear regression, partial association, multicategorical categorical predictors, moderation, the interpretation of model parameters, and other topics in linear models as time allows. Focus is on conceptual understanding rather than mathematical computation. Students will gain experience practicing their learning through various assignments using statistical software. This course is the second of two required statistical methods courses in the Ph.D. program in psychology and functions as the foundation course for further advanced study in applied statistical methods at the graduate level in psychology and other disciplines. Because you should already be familiar with basic principles of statistics and inference from the prerequisite course, this course will be delivered at a quicker pace than PSYCH 6810.

Course Administration

Course Materials
- IBM Statistics (“SPSS”), SAS, and R.
- A USB memory stick

Supplementary Reading
- The occasional PDF available on CARMEN.

Lecture and Lab Components

This course has a lecture and a lab component. The lectures will be held in PS35 on Monday and Wednesday mornings and focus on concepts, theory, and some practical computational matters. The lab component of the course is held on Thursday in the morning in PS22 in the department’s computing lab. This component of the course will focus on hands-on training using statistical software, though some new concepts and ideas will be
presented in the lab as well. The lab component is the primary place where you will get your hands dirty learning how to write statistical code in SPSS and R under the guidance of the TAs. It is also a good place to have discussions about concepts with a smaller group and the TAs, who will sometimes have opinions that are different than the instructor’s on matters of controversy or practice. The course TAs, who are also graduate students, have knowledge and advice pertinent to the course and graduate school in general that will benefit you in one way or another. Use them as a resource. Due to space constraints, you should attend the lab in which you are registered, at least until enrollment and everyone’s schedules settle down.

Computer Software

In this class you will get exposure to and practice with statistical programming and data management using IBM Statistics, SAS, and R. Both of these programs are installed in the computer lab in PS22. You are encouraged to download and install each of these programs on your personal laptop or other computer so you will have access to them outside of the lab. SPSS and SAS is freely available to students through an OSU site license. For download and licensing instructions, see https://ocio.osu.edu/software. R can be downloaded at no charge from http://www.r-project.org.

There is no required text or reading pertinent to the use of these programs. You are encouraged to seek out various books and web resources for additional information about these programs. On CARMEN you will find “Using SPSS,” “Using SAS,” and “Using R” documents that will be periodically updated during the semester. You will find these helpful.

For additional guidance, consider consulting one of many resources on the use of computer software for data analysis. Some suggestions are below, many of which are available electronically through the OSU libraries.

Additional material on the web:
- http://www.ats.ucla.edu/stat/

Books on SPSS (available electronically through the OSU Libraries)

Books on SAS (available for free through the OSU Libraries)

Books on R (available for free through the OSU Libraries)

Evaluation

You will be evaluated exclusively based on your performance on various assignments and exams. Each assignment or exam is converted from points earned to a 0 to 100 scale, and weighted as described below when the final course grade is derived. The grading system in this class is largely a percentage-based system, where

93+ = A; 89-92 = A-; 85-88 = B+; 78-84 = B; 74-77 = B-; 70-73 = C+; 65-69 = C; 60-64 = C-; 55-59 = D+; 50-54 = D; <50 = E
**Midterm Exam (20%)**: There will be a midterm examination on March 8th that requires you to demonstrate that you are comfortable with the methods and concepts outlined in the course thus far. The midterm will be open notes and open book, but should not be approached casually because of this. This exam will be given only once. With the exception of an extreme, documented, and unforeseen circumstance, no makeup exam will be provided if you miss it. It will not be given early or late to accommodate course or personal conflicts you have built into your schedule.

**Final Exam (20%)**: You will be given a take home final exam on the last day of class that is due between 10AM and noon on April 27, which is the date and time the registrar has scheduled the final exam for this course. A dataset will be distributed to you and your job will be to read the data, do any needed data manipulation, conduct several analyses, and interpret and describe the results. You may turn in the exam early if desired.

**Lab Participation (20%)**: Each week you will meet with a graduate teaching assistant in Psychology 22. You are expected to attend each meeting and participate in various activities. Everyone starts with 100% of participation points. Points are docked for failing to attend, not turning in various exercises you will be asked to complete now and then, and so forth.

**Take-home assignments (40%)**: At five various points during the semester you will receive an assignment to complete. They will be distributed at least one week prior to the due date. The tentative due dates are

- Assignment #1: January 31st
- Assignment #2: February 21st
- Assignment #3: March 5th
- Assignment #4: April 2nd
- Assignment #5: April 18th

Assignments are due at the beginning of class on the due date. Due dates may be adjusted depending on the pacing of the material in class. In no circumstance will an assignment be due earlier than the date listed, but the due date may be pushed back if the course gets behind schedule or it is otherwise warranted. Unless you are told otherwise, you may work as a team with one or two other students enrolled in this class when working through graded assignments. In this case, you will turn in one response to the assignment with each person’s name on it, and you will each receive the grade allocated to your response. It is a violation of the Code of Student Conduct to collaborate on the assignments with anyone who is not a part of your team (other than the course instructor or the course TAs) prior to the time and date the assignment is due. Such collaboration includes exchanging answers, electronically or otherwise, or other forms of casual or formal conversation related to the content of the assignment. Violators of this rule will be sent to the Committee on Academic Misconduct in accordance with university policy.

In some cases, answers will be right or wrong, but in other cases there is room for subjective grading based on presentation, thoroughness, and so forth. Writing quality will matter when your assignments are graded. Be specific, precise, attentive to detail, and careful in how you phrase your answers, as you will be graded based on your actual answer, not what you intended to say or said awkwardly. Submit something you will be proud to submit, not something to just get you by until the next deadline. Do not wait until the last minute to start the assignments, as procrastination will show in the quality of your work. Use Word or a comparable word processing program to complete assignments. Use the symbol font for Greek symbols when needed, and learn to use Microsoft’s Equation editor or some other system for generating clean, crisp mathematical expressions. Be careful in your formatting of mathematical equations, and be aware of order of operations rules. Submit something presented neatly and that you will be proud to claim is a product of your thinking.
You are expected to turn in a hard copy of your assignment with all sheets stapled together, as well as upload an electronic copy to CARMEN. An assignment is determined to be late if the hard copy is not delivered by the date and time the assignment is due.

The answers for each question will provided soon after the assignment is due. It is up to you to check your responses with the official answer sheet. If you do not understand any inconsistencies between the official answers and your own, you may contact me for assistance. Frequently, we will discuss the assignments in class or lab after the due date has passed and everyone has turned in their assignment.

**Policies and Miscellaneous Matters**

**Late or Absent Assignments and Missed Exams**

Unless otherwise notified, assignments are due by the beginning of class on the date due. An assignment will not be accepted more than 24 hours after the due date. The only exceptions to these rules are tragic, extraordinary, and totally unforeseen personal circumstances that are convincingly documented no later than 24 hours after the due date. Exams are given only once. As noted above, no make-up exams are given except in extraordinary, unforeseen, and documented circumstances.

**Attendance**

There is no formal attendance policy for this course. However, you are expected to attend regularly. If I believe attendance is slipping, I reserve the right to create an attendance policy. Not attending class regularly is a very bad idea, as some of the examined material will be presented only during lecture or labs, and many of the SPSS, SAS, and/or R techniques discussed in lab are not always easily found in the documentation or other readings. As a general rule, subjective decisions about grading on assignments are less likely to go in your favor if you appear not be putting in the effort to learn by regularly attending class. Attendance may be taken in lectures and lab on randomly chosen days.

**Academic Misconduct**

All students at Ohio State University are bound by the Code of Student Conduct (see http://studentaffairs.osu.edu/resource_csc.asp). Violations of the Code in this class, especially pertaining to 3335-23-04 Section A on Academic Misconduct, will be aggressively prosecuted through the procedures the university has set up to deal with violations of the Code. If any of the teaching staff believes you have violated the Student Code, your case will be referred to the Committee on Academic Misconduct (see http://oaa.osu.edu/coam.html). Not following the rules of the course as outlined in this syllabus or provided orally is considered a violation of the Code of Student Conduct. Penalties for academic misconduct from a graduate student are especially stiff and are almost certain to include failure in this course and suspension from the university, even for a first offense. Graduate students in Psychology found in violation of the Code are, needless to say, rarely perceived to be in good standing and can expect revocation of funding and, potentially, expulsion from the graduate program. Repeat offenses and especially egregious violations of the Code can result in expulsion from the University, regardless of program, even on the first offense. Make sure that you are familiar with the Code of Student Conduct, and familiarize yourself with “Ten Suggestions for Preserving Academic Integrity” available online at http://oaa.osu.edu/coamtensuggestions.html. I expect students who believe a classmate has violated this policy to come forth to me so the alleged violation can be investigated and appropriate action can be taken if needed. If possible, your identity will be protected. You can be found in violation of the Code of Student Conduct for assisting others violate the Code. “Cheating” in any form in graduate school will not be tolerated, and the consequences for doing so are very severe.
Having said all this, we understand that there is value to study groups and assisting others acquire understanding of the material in this class. We encourage such study groups and we will do what we can to help these groups flourish.

**Tentative Nature of this Syllabus**

This syllabus represents a contract in the works. Events that transpire over the term may require me to modify the administration of this course and therefore the syllabus. In the event I need to modify the syllabus, I will announce the modification in class and on CARMEN and/or through email. Ultimately, it is the student’s responsibility to keep up with any such modifications and be aware of current policies and deadlines.

**Mathematics Anxiety**

Often one of the student’s greatest barriers to mastering material in statistics courses is fear of mathematics. Many students lock up with anxiety when they are asked to do any computation and this anxiety typically interferes with the ultimate goal of conceptual understanding. I hope you will not let this happen to you. In this class most of the computations will be done by computer, although during lecture some basic computations cannot be avoided. You will be shown formulas and expect to understand them. But you need not understand the mathematics of the formula so much as you need to understand how they are conceptually used. To be sure, you need to be comfortable with basic mathematical operations. This is graduate school, and you have chosen to study the scientific discipline of psychology or a related social science. You will have to think analytically and quantitatively throughout your days as a graduate student at this university. If this is something you do not feel up to, you probably don’t belong here. You will be challenged in this course, but there is no reason why everyone can’t do well. The best thing that you can do to enhance your likelihood of success is discarding all the baggage that you may be bringing with you into the course—fear, anxiety, a belief that you are no good with numbers, or that you are destined to fail.

With these words of encouragement, at the same time remember that this is a graduate-level course. I admonish Master’s students with less experience dealing with the intensity and pace of graduate school, and even Ph.D. students with a Master’s degree from another university, not to approach this course as if it were an undergraduate course. You will not succeed if you don’t dedicate time and energy to reading and contemplating the material. You will probably find yourself working harder during your first year of graduate school than you have ever worked before.

**PSYCH 6811 online**

This course is represented on CARMEN. I will upload data files, PowerPoint slides, PDFs of extra readings, and other course-relevant material to CARMEN. Learn to use CARMEN, as it is used throughout this university in almost every class you will take.

**Roles of the Teaching Assistant (TA)**

The graduate teaching assistants are responsible for the lab component of the course, grading, and helping you master the topics. Although the TAs will do their best to respond to your concerns and questions in a timely fashion, keep in mind that they are also students at OSU and have their own demands and schedules that may not always mesh with yours. So please be patient if they are not available to respond to your needs immediately.
**Students with Disabilities**

The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I should register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. For accommodations needed related to an exam, seek the section of the syllabus above on examinations. **SLDS contact information:** slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

**Sexual Misconduct/Relationship Violence**

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at [http://titleix.osu.edu](http://titleix.osu.edu) or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu

**Schedule of Lecture Topics**

The course is divided up into six units, with the time dedicated to each unit being flexible and determined in part by the pace of discussion and questions asked during lectures. We will use the assignment due dates as a rough guide to scheduling. You will be told when we are transitioning into the next unit.

I recommend you read the readings for each unit several times as we work through the unit, for your understanding will grow by this repetition, and after concepts that may have confused you at first are clarified during lecture. You are advised to set aside time each day to read what you have not, and reread what you have.

If you took PSYCH 6810, you should still have a copy of Hayes (2005). Use this as optional supplementary reading. Chapters 12 and 13 roughly overlap with Units 1, 2, and 3. Chapters 14-15 roughly overlap with Unit 4, and Chapter 16 roughly overlaps with Unit 5.

**UNIT 1: Regression analysis fundamentals**

*This unit introduces the fundamentals of linear regression analysis using the simple regression model. Topics include the least squares criterion, residuals, estimation and interpretation of model parameters, the correlation versus the regression coefficient.*

Reading: Darlington and Hayes (2017) Chapters 1 and 2

**UNIT 2: Multivariate association and partial association**

*This unit addresses the use of the linear regression model for generating estimates of one variable from a set of predictor variables. Topics covered include the multiple correlation, partial regression coefficients, partial and semipartial association*

Reading: Darlington and Hayes (2017) Chapters 3, Chapter 6 for your interest (optional)
UNIT 3: Statistical inference

This unit addresses statistical inference, including inference about multiple correlation as well as for individual variables in a model. Also included are such topics as collinearity, bias, and power.

Reading: Darlington and Hayes (2017) Chapter 4

UNIT 4: Extending the fundamentals

This unit further develops your understanding of the fundamentals of linear regression analysis, including dichotomous regressors, sets of regressors and setwise partial association, regression to the mean, variable selection methods, “effect size”

Reading: Darlington and Hayes (2017) Chapters 5 and 7, 8

UNIT 5: Multicategorical regressors

This unit illustrates the correspondence between linear regression analysis and analysis of variance and covariance. Various coding systems for representing multicategorical variables are described as well as the interpretation of regression coefficients when using different coding strategies. Omnibus inference about a model is compared to analysis of variance. Also addressed is the comparison of groups when adjusting for other variables, adjusted means, and the equivalence between linear regression analysis and analysis of covariance. We also discuss the multiple test problem.

Reading: Darlington and Hayes (2017) Chapters 9, 10, and 11

UNIT 6: Nonlinearity and interaction

In this unit, the constraints that one variable’s effect on another in a regression model is linear, or that it is independent of other variables in the model, are relaxed. With a simple extension of the model, we address how to model curves, as well as how to set up a model that allows one variable’s effect to depend linearly on another variable in the model. Interpretation of model coefficients, the influence of variable scaling, and probing and visualizing interactions is addressed.

Reading: Darlington and Hayes (2017) Chapters 12, 13, and 14

UNIT 7: Regression diagnostics and assumptions and other miscellaneous topics

This unit covers various miscellaneous topics as time allows. Some possible topics include the hunt for influential or “irregular cases,” and a discussion of the statistical assumptions underlying the use and interpretation of linear regression analysis.

Reading: Darlington and Hayes (2017) Chapter 16, and perhaps other material to be announced

Final exam due no later than April 27, 10:00 – noon.
REQUIRED TEXT – [assigned readings listed inside square brackets]:


OPTIONAL TEXTS – (optional readings listed inside parentheses):


[***Note: There are many inexpensive copies of both optional paperback texts on Amazon.***]

SUPPLEMENTAL READINGS (CHAPTERS AND JOURNAL ARTICLES) WILL BE AVAILABLE ON THE COURSE CARMEN SITE.

COURSE GOALS/REQUIREMENTS:

The aim of this course is to provide an overview of the major theories and empirical research findings in the area of attitude change – how people’s opinions, beliefs, and evaluations are formed and modified. The course is divided into three sections for purposes of the exams (see topic schedule).

Grading: Grades will be determined based on the written assignment (19%) and on the three exams (27% each).

APPROMXIMATE SCHEDULE OF TOPICS

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic (Readings)</th>
</tr>
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<tbody>
<tr>
<td>1/10</td>
<td>Introduction and overview. Why study attitudes? What are they? [C, F, &amp; K, Ch. 1, pp. 1-7; Ch. 2, pp. 43-56]  (P &amp; C, Ch. 1, pp. 3-9; M &amp; H, Ch. 1 pp. 3-10, Ch. 2, pp. 24-43)</td>
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<tr>
<td>1/12</td>
<td>Measuring attitudes  [C, F, &amp; K, Ch. 1, pp. 7-19; Ch. 9, pp. 226-252; Wegener &amp; Fabrigar, 2004; Fazio &amp; Olson, 2003]  (P &amp; C, Ch. 1, pp. 3-22; M &amp; H, Ch. 1 pp. 10-22)</td>
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<tr>
<td>1/17</td>
<td>Attitude structure and attitude strength  [C, F, &amp; K, Ch. 2, pp. 23-43; Ch. 9, pp. 226-252; Wegener, Downing, Krosnick, &amp; Petty, 1995]  (M &amp; H, Ch. 1 pp. 34-37, 218-220)</td>
</tr>
<tr>
<td>1/19</td>
<td>NO CLASS: Society for Personality and Social Psychology Conference</td>
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</table>
1/24 Attitude functions and functional approaches to change
[C, F, & K, Ch. 3, pp. 58-82; Snyder & DeBono, 1985]
(P & C, Ch. 1, pp. 7-8; M & H, Ch. 4, pp. 38-43, 160-161, 220-222)

1/26 Simple affective/associative mechanisms
[C, F, & K, Ch. 4, pp. 102-104; Ch. 10, pp. 253-255; P & C, Ch. 2 on CARMEN; Clore & Schnall, 2005, pp. 437-465]
(M & H, Ch. 6, pp. 111-124)

1/31 Message learning/reception.
[C, F, & K, Ch. 4, pp. 83-94, 98-102, 104-112]
(P & C, Ch. 3; M & H, Ch. 5, pp. 89-94, Ch. 7, pp. 134-135)

2/2 Judgmental approaches/Assimilation and contrast
[C, F, & K, Ch. 4, pp. 94-97; P & C, Ch. 4 on CARMEN]

2/7 Wrap up topics and exam review.

2/9 Exam 1

2/14 Self-persuasion theories.
[P & C, Ch. 8, pp. 213-226, 247-254 on CARMEN; Tesser, 1978]
(M & H, Ch. 5, pp. 94-96, Ch. 7, 134-135)

2/16 The Elaboration Likelihood Model (ELM) -- motivation and ability as moderators of effortful persuasion processes.
[C, F, & K, Ch. 5, pp. 114-129; Petty & Cacioppo, 1986, Ch. 1; Petty & Wegener, 1999] (P & C, Ch. 9; M & H, Ch. 5, pp. 96-104)

2/21 The ELM (continued) -- Multiple roles for persuasion variables: I.
(M & H, Ch. 6, pp. 124-126;)

2/23 Multiple Roles for persuasion variables: II. Mood and persuasion
[Wegener & Petty, 2001]

2/28 Elaboration: Persistence of attitudes over time and resistance to counter-persuasion.
[C, F, & K, Ch. 5, pp. 132-133; Petty, Haugtvedt, & Smith, 1995; Petty & Wegener, 1998, pp. 366-370]

3/2 Meta-cognition and Attitude Change: I. Self-validation
[C, F, & K, Ch. 5, pp. 136-139; Briñol & Petty, 2009]

3/7 Meta-cognition and Attitude Change: II. The Meta-Cognitive Model, and Bias Correction
[C, F, & K, Ch. 5, pp. 135-136; Petty, Briñol, & DeMarree, 2007; Petty, Wegener, & White, 1998] (M & H, Ch. 5, pp. 106-108)
3/9 Pre-message attitude strength and message processing
[Clark & Wegener, 2013]
***HAVE WRITTEN ASSIGNMENT TOPIC APPROVED BY THIS DATE***

3/14 – 3/16 NO CLASS: SPRING BREAK

3/21 Wrap up topics and exam review.

3/23 **Exam 2**

3/28 Resistance: Motivation and structure
[C, F, & K, Ch. 8, pp. 199-225; Bernard, Maio, & Olson, 2003]
(P & C, Ch. 8, pp. 226-232; M & H, Ch. 10, pp. 195-196)

3/30 Attitude-Behavior Consistency
[C, F, & K, Ch. 6, pp. 145-168; Fabrigar, Wegener, & MacDonald, 2010]
(P & C, Ch. 1, pp. 22-36; M & H, Ch. 3, pp. 47-65)

4/4 Consistency theories -- Balance and congruity.
[C, F, & K, Ch. 8, pp. 200-201; P & C, Ch. 5, pp. 125-136 on CARMEN]
(M & H, Ch. 10, pp. 199-200)

4/6 Cognitive dissonance.
[C, F, & K, Ch. 7, pp. 174-186; Olson & Stone, 2005, pp. 226-234, 240-244]
(P & C, Ch. 5, pp. 137-160; M & H, Ch. 7, pp. 139-150)

4/11 Self-perception and self-affirmation as alternatives to cognitive dissonance.
[C, F, & K, Ch. 7, pp. 190-191, 192-195; Olson & Stone, 2005, 237-239, 249-254]
(P & C, Ch. 6; M & H, Ch. 7, pp. 135-138)
***WRITTEN ASSIGNMENT DUE***

4/13 Varieties of current dissonance theories.
[C, F, & K, Ch. 7, pp. 187-192; Olson & Stone, 2005, 234-240, 244-249]

4/18 Wrap up topics and exam review.

4/20 NO CLASS: Midwestern Psychological Association Conference

Finals week: **Exam 3** (Wednesday, 4/26, 8:00-9:45am; PS 219)
Sexual misconduct/relationship violence: "Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at http://titleix.osu.edu or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu"

Academic Misconduct: "It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct at http://studentconduct.osu.edu"

The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.
PSYCH 6810  
Statistical Methods in Psychology I  
Fall 2017

Lecture : MW 9:35 to 10:55 in PS 35  
Lab : Th 9:35 to 10:55 / 11:10 to 12:30 in PS 22  
Instructor : Dr. Andrew F. Hayes (hayes.338, Lazenby Hall LZ230)  
Teaching Assistants : Jack DiTrapani (ditrapani.4, LZ240d)  
Saemi Park (park.2339, LZ240d)  
Office hours : By appointment, preferably; by happenstance, frequently.

Course catalog description  
Basic concepts of descriptive and inferential statistics; includes estimation, hypothesis testing, non-parametric techniques, and analysis of variance.

Instructor’s description  
This course provides a broad overview of the fundamentals of statistical description and inference and their implementation in computer software. Topics include data description and visualization, the theory and practice of estimation and hypothesis testing, and special and simple cases of the general linear model used to compare groups as typically applied in psychology and other social sciences. This course is the first of two required statistical methods courses in the Ph.D. program in Psychology, is a prerequisite to PSYCH 6811 (Statistics in Psychology II: Linear regression analysis), and functions as the foundation course for further advanced study in applied statistical methods at the graduate level in psychology and other disciplines. This course will cover material you may have covered in related courses as an undergraduate, but it will do so at a graduate level and a higher level of abstraction and a focus on theory, but without unnecessary higher-level mathematics.

Course Administration

Required Course Materials
  I recommend purchasing the soft cover version and saving a lot of money. Also on reserve at Thompson Library.  
The ISBN for the soft cover version is 9781138982932  
• “Using SPSS”/”Using SAS”/”Using R”: PDF documents freely available from the CARMEN web page.  
• IBM Statistics (“SPSS”), SAS and R.  
• A USB memory stick  
• Additional supplementary and optional readings will be posted as PDF files on CARMEN as needed.

Supplementary/Optional Course Materials

Additional texts (on reserve in Thompson Library)
Additional material on the web:  
• http://www.ats.ucla.edu/stat/
Books on SPSS (available electronically through the OSU Libraries)


Books on SAS (available for free through the OSU Libraries)


Books on R (available for free through the OSU Libraries)


Lecture and Lab Components

This course has a lecture and a lab component. The lectures will be held in PS35 on Monday and Wednesday mornings and focus on concepts, theory, and some practical computational matters. The lab component of the course is held on Thursday in the morning in PS22 in the department’s computing lab. This component of the course will focus on hands-on training using statistical software, though some new concepts and ideas will be presented in the lab as well. The lab component is the primary place where you will get your hands dirty learning how to write statistical code under the guidance of the TAs. It is also a good place to have discussions about concepts with a smaller group and the TAs, who will sometimes have opinions that are different than the instructor’s on matters of controversy or practice. The course TAs, who are also graduate students, have knowledge and advice pertinent to the course and graduate school in general that will benefit you in one way or another. Use them as a resource. **Due to space constraints, you must attend the lab in which you are registered.**

Computer Software

In this class you will get exposure to and practice with statistical programming and data management using IBM Statistics (aka “SPSS”), SAS, and R. All three of these programs are installed in the computer lab in PS22. You are encouraged to download and install each of these programs on your personal laptop or other computer so you will have access to them outside of the lab. SPSS and SAS are freely available to students through an OSU site license. See https://ocio.osu.edu/software for instructions on how to download and license. R can be downloaded at no charge from http://www.r-project.org. SPSS is available for both Windows and Mac OS, whereas SAS is available only for Windows through OSU. Note that Windows 10 users require the Windows 10 business class operating system.

There is no required text or reading pertinent to the use of SPSS, SAS, and R. You will find three “Using...” documents on CARMEN pertinent to the use of SPSS, SAS, and R. This will most likely be updated periodically as the semester progresses. You are encouraged to seek out various books and web resources for additional information about these programs. Some suggestions can be found in the “supplementary materials” section above.

Evaluation

You will be evaluated exclusively based on your performance on various assignments and exams. Each assignment or exam is converted from points earned to a 0 to 100 scale, and weighted as described below when the final course grade is derived. The grading system in this class is largely a percentage-based system, where
Midterm Exam (20%): There will be a two-part midterm examination on October 18th and 19th that requires you to demonstrate that you are comfortable with the methods and concepts outlined in the course thus far. The midterm will be open notes and open book, but should not be approached casually because of this. This exam will be given only once. With the exception of an extreme, documented, and unforeseen circumstance, no makeup exam will be provided if you miss it. It will not be given early or late to accommodate course or personal conflicts you have built into your schedule. Students with disabilities needing additional time or a distraction free workspace to complete the exam should register with Student Life Disabilities Services (SDLS) at least two weeks in advance of the exam to have the exam proctored by officials at SLSD.

Final Exam (20%): You will be given a take home final exam on the last day of class that is due no later than 10AM on December 11th. A dataset will be distributed to you and your job will be to read the data, do any needed data manipulation, conduct several analyses, and interpret and describe the results. You may turn in the exam early if desired.

Lab Participation (10%): Each week you will meet with a graduate teaching assistant in Psychology 22. You are expected to attend each meeting and participate in various activities. Everyone starts with 100% of participation points. Points are docked for failing to attend, not turning in various exercises you will be asked to complete now and then, and so forth.

Take-home assignments (50%): At various points during the semester you will receive an assignment to complete. There will be five or six such assignments roughly corresponding to each unit, but the topics covered in various assignments may straddle units. The due dates can be found in the schedule of topics at the end of this syllabus. These due dates are tentative. Assignments are due at the beginning of class on the due date. In no circumstance will an assignment be due earlier than the date listed, but the due date may be pushed back if the course gets behind schedule or it is otherwise warranted. Unless you are told otherwise, you may work as a team with one or two other students enrolled in this class when working through graded assignments. In this case, you will turn in one response to the assignment with each person’s name on it, and you will each receive the grade allocated to your response. It is a violation of the Code of Student Conduct to collaborate on the assignments with anyone who is not a part of your team (other than the course instructor or the course TAs) prior to the time and date the assignment is due. Such collaboration includes exchanging answers, electronically or otherwise, or other forms of casual or formal conversation related to the content of the assignment. Violators of this rule will be sent to the Committee on Academic Misconduct in accordance with university policy.

In some cases, answers will be right or wrong, but in other cases there is room for subjective grading based on presentation, thoroughness, and so forth. Writing quality will matter when your assignments are graded. Be specific, precise, attentive to detail, and careful in how you phrase your answers, as you will be graded based on your actual answer, not what you intended to say or said awkwardly. Submit something you will be proud to submit, not something to just get you by until the next deadline. Do not wait until the last minute to start the assignments, as procrastination will show in the quality of your work. Use Word or a comparable word processing program to complete assignments. Use the symbol font for Greek symbols when needed, and learn to use Microsoft’s Equation editor or some other system for generating clean, crisp mathematical expressions (such as LaTeX, if you are already familiar with it or up to the challenge of learning it). Be careful in your formatting of mathematical equations, and be aware of order of operations rules (see assignment #0 for a review). Submit something presented neatly and that you will be proud to claim is a product of your thinking.
You are expected to turn in a hard copy of your assignment with all sheets stapled together, as well as upload an electronic copy to a CARMEN drop box labeled for that assignment. An assignment is determined to be late if the hard copy is not delivered by the date and time the assignment is due.

The answers for each question will provided soon after the assignment is due. It is up to you to check your responses with the official answer sheet. If you do not understand any inconsistencies between the official answers and your own, you may contact me for assistance. Frequently, we will discuss the assignments in class or lab after the due date has passed and everyone has turned in their assignment.

Policies and Other Miscellaneous Matters

Late or Absent Assignments and Missed Exams
Unless otherwise notified, assignments are due by the beginning of class on the date due. Points are lost for each hour an assignment is late, and an assignment will not be accepted more than 24 hours after the due date. The only exceptions to these rules are tragic, extraordinary, and totally unforeseen personal circumstances that are convincingly documented no later than 24 hours after the due date. Exams are given only once. As noted above, no make-up exams are given except in extraordinary, unforeseen, and documented circumstances.

Attendance
There is no formal attendance policy for this course. However, you are expected to attend regularly. If I believe attendance is slipping, I reserve the right to create an attendance policy. Not attending class regularly is a very bad idea, as some of the examined material will be presented only during lecture or labs, and many of the SPSS, SAS, and R techniques to be discussed in lab are not always easily found in the documentation or other readings. As a general rule, subjective decisions about grading on assignments are less likely to go in your favor if you appear not be putting in the effort to learn by regularly attending class. Due to space constraints, you must attend the lab in which you are registered.

Academic Misconduct
All students at Ohio State University are bound by the Code of Student Conduct (see http://studentconduct.osu.edu/). Violations of the Code in this class, especially pertaining to 3335-23-04 Section A on Academic Misconduct, will be aggressively prosecuted through the procedures the university has set up to deal with violations of the Code. If any of the teaching staff believes you have violated the Student Code, your case will be referred to the Committee on Academic Misconduct (see http://oaa.osu.edu/coam.html). Not following the rules of the course as outlined in this syllabus or provided orally is considered a violation of the Code of Student Conduct. Penalties for academic misconduct from a graduate student are especially stiff and are almost certain to include failure in this course and suspension from the university, even for a first offense. Graduate students in Psychology found in violation of the Code are, needless to say, rarely perceived to be in good standing and can expect revocation of funding and, potentially, expulsion from the graduate program. Repeat offenses and especially egregious violations of the Code can result in expulsion from the University, regardless of program, even on the first offense. Make sure that you are familiar with the Code of Student Conduct, and familiarize yourself with “Ten Suggestions for Preserving Academic Integrity” available online at http://oaa.osu.edu/coamtensuggestions.html. I expect students who believe a classmate has violated this policy to come forth to me so the alleged violation can be investigated and appropriate action can be taken if needed. If possible, your identity will be protected. You can be found in violation of the Code of Student Conduct for assisting others violate the Code. “Cheating” in any form in graduate school will not be tolerated, and the consequences for doing so are severe.
Having said all this, we understand that there is value to study groups and assisting others acquire understanding of the material in this class. We encourage such study groups and we will do what we can to help these groups flourish. Except as discussed in the “Take Home Assignments” section above, those conversations should steer clear of questions that are part of graded assignments.

**It is considered a violation of the Code of Student conduct to provide, receive, or use materials from this course from a prior year, whether taught by the current instructor or someone else, when completing assignments or studying for exams. In addition, distribution of PDFs or other electronic versions of textbooks or other commercial materials to others who have not purchased or not otherwise licensed to have such materials, as well as possession of such materials so received, is not only illegal but also a violation of the university’s Code of Student Conduct and is grounds for suspension or dismissal from the university.**

**Tentative Nature of this Syllabus**
This syllabus represents a contract in the works. Events that transpire over the term may require me to modify the administration of this course and therefore the syllabus. In the event I need to modify the syllabus, I will announce the modification in class and on CARMEN and/or through email. Ultimately, it is the student’s responsibility to keep up with any such modifications and be aware of current policies and deadlines.

**Mathematics Anxiety**
Often one of the student’s greatest barriers to mastering material in statistics courses is fear of mathematics. Many students lock up with anxiety when they are asked to do any computation and this anxiety typically interferes with the ultimate goal of conceptual understanding. I hope you will not let this happen to you. In this class most of the computations will be done by computer, although during lecture some basic computations cannot be avoided. You will be shown formulas and expect to understand them. But you need not understand the mathematics of the formula so much as you need to understand how they are conceptually used. To be sure, you need to be comfortable with basic mathematical operations. This is graduate school, and you have chosen to study the scientific discipline of psychology or a related social science. You will have to think analytically and quantitatively throughout your days as a graduate student at this university. If this is something you do not feel up to, you probably don’t belong here. You will be challenged in this course, but there is no reason why everyone can’t do well. The best thing that you can do to enhance your likelihood of success is discarding all the baggage that you may be bringing with you into the course—fear, anxiety, a belief that you are no good with numbers, or that you are destined to fail.

With these words of encouragement, at the same time remember that this is a graduate-level course. I admonish Master’s students with less experience dealing with the intensity and pace of graduate school, and even Ph.D. students with a Master’s degree from another university, not to approach this course as if it were an undergraduate course. You will not succeed if you don’t dedicate time and energy to reading and contemplating the material. You will probably find yourself working harder during your first year of graduate school than you have ever worked before.

**PSYCH 6810 online**
This course is represented on CARMEN. I will upload data files, PowerPoint slides, PDFs of extra readings, and other course-relevant material to CARMEN. Learn to use CARMEN, as it is used throughout this university in almost every class you will take.
Roles of the Teaching Assistants
The graduate teaching assistants (TA) are responsible for the lab component of the course, grading, and helping you master the topics. Although the TAs will do their best to respond to your concerns and questions in a timely fashion, keep in mind that they are also students at OSU and have their own demands and schedules that may not always mesh with yours. So please be patient if they are not available to respond to your needs immediately.

Students with Disabilities
The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I should register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. For accommodations needed related to an exam, seek the section of the syllabus above on examinations. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Sexual Misconduct/Relationship Violence:
Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at http://titleix.osu.edu or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu

Schedule of Lecture Topics

The course is divided up into six units, with the time dedicated to each unit being flexible and determined in part by the pace of discussion and questions asked during lectures. We will use the assignment due dates as a rough guide to scheduling. You will be told when we are transitioning into the next unit. I recommend you read each chapter several times as we work through the unit, for your understanding will grow by this repetition, and after concepts that may have confused you at first are clarified during lecture. You probably won’t do as well in this course as you could if you don’t read the book. You are advised to set aside time each day to read what you have not, and reread what you have.

UNIT 1: Basic Concepts, Sampling and Measurement, Data Description

This unit covers variables, samples, statistics and parameters, sampling and basic measures of central tendency and variation, as well as some graphical and tabular displays of data.

Reading: Chapters 1, 2, 3, and 4
Assignment #1 tentative due date: September 13

UNIT 2: Fundamentals of Probability and the Normal Distribution

In this unit we cover simple laws of probability, conditioning, properties of the normal distribution, and probability and related computations primarily for normally-distributed variables.
UNIT 3: Fundamentals of Estimation Theory, Sampling Distributions, Point and Interval Estimates

This unit focuses on the sampling behavior of an estimator, the central limit theorem, the t distribution, using estimation theory to make educated guesses about parameters (as point and interval estimates), and the relationship between sample size and precision of estimation.

UNIT 4: Hypothesis Testing: Concepts and Theory

This unit outlines the concepts and theory of hypothesis testing, including null and alternative hypotheses, decision errors, power, and the application of theory to simple inferential tasks such as testing a hypothesis about a single parameter.

UNIT 5: Hypothesis Testing in Practice I: Comparing Two Groups

This unit extends the theory and practice of hypothesis testing to comparisons between two means (independent groups and two dependent or matched means) as well as proportions in the form of tests of independence in a crosstabulation.

UNIT 6: Hypothesis Testing in Practice II: More than Two Groups

This final unit further extends the theory and practice of hypothesis testing to problems involving more than two groups or means.

FINAL EXAM DUE: Monday December 11, 10:00 AM
Administrative Notes
General Overview and Course Objectives

In this course, the goal is to inform current doctoral students of clinical psychology of the latest research within the field. Students will be introduced to research from external speakers, chosen for their expertise in a field of study closely matching or informing the current research being conducted in the clinical area. Speakers will also be invited to cover topics on professional development, ethics, and multicultural competence training. In addition, the goal of this course is to also provide a platform for the students to present their own research during their tenure here in the department. The format of an hour-long presentation, followed by questions and answers will mimic the forum of a job presentation that the students will likely encounter upon graduation from the program. Such a course will thus enable both a critical appreciation of the work being conducted outside the department, as well as inform students of the latest clinical science research being pursued in our department.

The specific objectives of this course include:

- fostering the growth of intellectual curiosity, research maturity, multicultural competence, ethical principles underlying research and practice in clinical sciences, and professional development through exposure to experts in the field.
- an understanding of the cutting-edge research happening in the area and fostering further collaborative efforts.
- gaining experience in thinking about a programmatic line of research and presenting it to a broader audience.
- critically reading peer-reviewed journal articles and synthesizing that with the presentation to write succinct, thoughtful papers.

Classroom Environment

It is essential that our classroom be a place where people feel comfortable expressing their thoughts without fear of unduly critical or judgmental responses. I expect all of my students to be respectful of the widely varied experiences and backgrounds presented by classroom members. You may expect the same level of respect from me. Disrespect or discrimination on any basis, including but not limited to ethnicity, sex, sexual orientation, physical ability, class, religion, or value system, will not be tolerated.

Class Discussion/Participation

It is expected that students will actively engage with the speaker and course instructor, as participation in class will count towards the class grade. In order for all discussions to go smoothly, all students must have assigned readings completed before each class period.

Special Considerations: Students with Disabilities

If you have a diagnosed condition or disability that causes difficulty with learning in the classroom, completing assignments as described, or taking examinations, please see me as soon as possible and provide documentation if it is
available. I will do whatever I can to accommodate your legitimate needs. According to University policy, it is the student’s responsibility to notify the instructor of any special needs. The Office for Disability Services is located in 098 Baker Hall, 113 W. 12th Avenue (http://slds.osu.edu). All information and documentation of disability is strictly confidential.

**Medical, Mental Health and Personal Emergencies**

If you must miss multiple classes, or assignments due to a medical or personal emergency, discuss your situation with me as soon as possible. Do not wait until the end of the semester or until the problem has been resolved.

**Academic Misconduct**

All students at the Ohio State University are bound by the Code of Student Conduct (see http://oaa.ohio-state.edu/coam/code.html). Violations of the code in this class will be dealt with according to the procedures detailed in that code. Specifically, any alleged cases of misconduct will be referred to the Committee on Academic Misconduct. It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with written assignments. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct.

**Course Requirements**

Two weeks before the scheduled presentation, students will be presented with 1-2 readings from the external speakers, and if possible, from the internal speakers as well. These readings will be posted electronically on Canvas and it is expected that all students will be completing the readings before the presentation.

For this semester, we have a total of 14 classes scheduled, and it is expected that students will attend all 14 classes. However, you are permitted to miss two classes for extenuating circumstances without any impact on your grade. For the remainder of the 12 classes, students will be awarded 5 points for each attendance, for a total of 60 points for class attendance and participation. In the event that a student misses more than two classes, please contact the course instructor and make alternative arrangements for earning the missed points.

In addition, for 4 of these classes, students will be asked to submit a “reflection” paper based on the readings and presentation. This reflection paper, due on Canvas before start of next week’s class and worth 10 points each, will be in the form of an abstract (no more than 250 words), synthesizing your understanding of the presented topic and possibly even reflecting on how either the methodology utilized in the research or theoretical approach employed might inform your own program of research.

**Grading**

Attendance and Participation: 60%
Reflection Papers: 40%
<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>January 12(^{th}), 2018</td>
<td>Jill Cyranowski, Chatham University</td>
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<td>January 19(^{th}), 2018</td>
<td>Visitation Day - No Class</td>
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<td>January 26(^{th}), 2016</td>
<td>Chelsea Kane, Department of PM&amp;R, Ohio State University (Professional Development Talk)</td>
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<td>February 2(^{nd}), 2018</td>
<td>Nicole Jackson, Columbus VA (Multicultural Competence Training)</td>
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<td>February 9(^{th}), 2018</td>
<td>Kathy Wright, College of Nursing, Ohio State University</td>
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<td>February 16(^{th}), 2018</td>
<td>Monica Rosenberg, Department of Psychology, Yale University</td>
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<tr>
<td>February 23(^{rd}), 2018</td>
<td>Karin Coifman, Department of Psychology, Kent State University</td>
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<tr>
<td>March 2(^{nd}), 2018</td>
<td>Michael Boroughs, Department of Psychology, University of Windsor</td>
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<td>March 9(^{th}), 2018</td>
<td>Jennifer Cheavens, Department of Psychology, Ohio State University</td>
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<tr>
<td>March 16(^{th}), 2018</td>
<td>Spring Break – No class</td>
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<td>March 23(^{rd}), 2018</td>
<td>Student Presentations</td>
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<td>March 30(^{th}), 2018</td>
<td>Brittney Schirda &amp; Matt Southward, Ohio State University</td>
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<td>April 6(^{th}), 2018</td>
<td>Lisa Christian, Department of Psychiatry, Ohio State University</td>
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<td>April 13(^{th}), 2018</td>
<td>Zach Rosenthal, Department of Psychiatry, Duke University</td>
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<tr>
<td>April 20(^{th}), 2018</td>
<td>Ryan Nash, Center for Bioethics and Medical Humanities, Ohio State University</td>
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<tr>
<td>April 27(^{th}), 2018</td>
<td>Keith Yeates, Department of Psychology, University of Calgary</td>
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Course Syllabus

Jump to Today

Lifespan Developmental Psychopathology I
(Psychology 6853)

Fall, 2017
Wed, 1:00-3:45 pm
PSC 115  (http://www.osu.edu/map/building.php?building=144)

Instructors: Theodore P. Beauchaine, Ph.D.
Michael W. Vasey, Ph.D.

Office: 135 Psychology Building
141 Psychology Building
1835 Neil Ave
1835 Neil Ave

Office Hours: by appointment
by appointment

Phone: (614) 292-3155
(614) 292-2951

Email beauchaine.1@osu.edu (mailto:beauchaine.1@osu.edu)
vasey.1@osu.edu (mailto:vasey.1@osu.edu)

Website http://tpb.psy.ohio-state.edu/LAP/home_.htm
(http://tpb.psy.ohio-state.edu/LAP/home_.htm)

Class Website https://carmen.osu.edu/  (https://carmen.osu.edu/)

Overview

This is the first of a two-part sequence (6853, 6854) that focuses on the emergence and expression of psychopathology across the lifespan. The purpose of this sequence is to familiarize you with current knowledge of psychopathology and its complex etiologies across all stages of life. We adopt a strong developmental psychopathology perspective, which we introduce in Week 1. According to this perspective, psychopathology, like most medical disorders, cannot be understood outside developmental context. Rather, patterns of maladjustment that we often refer to as psychopathological almost always emerge from complex transactions between
biological vulnerabilities and environmental risk factors over time. Thus, psychopathology occurs in a developing individual, and his or her interpersonal relationships, and in most cases cannot be defined, identified, or understood without considering the normal course of development. Furthermore, both typical and atypical development reflect influences of a vast array of biological, psychological, and contextual variables transacting across the lifespan.

Advances in our understanding of psychopathology over the past two decades have been astounding. Although encouraging, this places considerable burden on students of psychopathology. In decades past, courses such as these addressed descriptive aspects of mental illness, including epidemiology (incidence, prevalence, and distribution of disorders) and diagnostic categories (primarily the DSM). In contrast, we are now in a position to understand mechanisms through which descriptive aspects of psychopathology emerge. Specifying mechanisms represents advancement in any scientific discipline, and in psychopathology research, suggests possible points for intervention. Accordingly, modern day psychopathologists must have sufficient knowledge of molecular genetics, neurotransmitter systems, neural structures and their interconnections, human stress response systems, and how each can be altered by environmental adversity to eventuate in mental illness. Given the complexity of psychopathology and the need to understand mechanisms, we teach this course across two semesters, which enables us to provide appropriate background in development and function of neurobiological systems that subserve human emotion and self regulation, before turning to specific manifestations of psychopathology.

Objectives

This course sequence is intended to familiarize you with:

1. Foundational knowledge regarding:
   - the normal course of development in major domains of functioning (e.g., cognitive, emotional, social) across the lifespan.
   - major classes of influence (e.g., genetic, neural, hormonal, familial, cultural) on normal and abnormal development and ways they transact across the lifespan.
   - research designs and methods used to study psychopathology across the lifespan, and complexities and controversies confronted in doing such research.
   - major approaches taken to defining and classifying psychopathology across the lifespan, and limitations of each.

2. Major classes of psychopathology including information regarding:
   - prevalence, epidemiology, morbidity, mortality, and phenomenology.
   - classification, including relevant Diagnostic and Statistical Manual of Mental Disorders (DSM-5) diagnostic categories, factor-analytic approaches, and the Research Domain Criteria (RDoC).

https://osu.instructure.com/courses/25776/assignments/syllabus
empirically supported etiological theories, including factors that contribute to development, maintenance, progression, and amelioration of psychopathology across the lifespan.

issues of race and ethnicity related to phenomenology, classification, epidemiology, and etiology.

In the first course in the sequence (6853), we will cover the first of these domains, and begin on the second, with emphases on varieties of psychopathology that provide good contexts for developing further mastery of major classes of influences that contribute to typical and atypical development. We will make use of lectures, readings, video, written case examples, and discussion to promote mastery of course content. Note that treatment and assessment are covered in other courses and will not be covered in 6853 or 6854, except insofar as they provide insight into descriptive features or etiology of psychopathology (e.g., treatment or prevention as tests of etiological mechanisms).

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**Expected Outcomes**

When you complete this course sequence, it is our expectation that you will:

have broad survey knowledge of normative development in all major domains of functioning, and be familiar with current perspectives on major classes of influence on typical psychological development across the lifespan.

understand major research designs and methods used to study psychopathology, and the strengths and limitations of each.


be able to describe all major forms of psychopathology covered in this course. Thus, you should have a solid working knowledge of DSM-5 [http://www.dsm5.org/Pages/Default.aspx], diagnostic criteria and associated information for each disorder. You will also be able to describe aspects of each disorder that are not well represented in the DSM. Included in your knowledge should be information about development, epidemiology (e.g., typical age of onset and risk factors such as age, sex, ethnicity, socioeconomic status [SES], and physical health factors, familial inheritance patterns, molecular genetic vulnerabilities, course and prognosis, subtypes, and common comorbid conditions).

understand current etiological theories and their supporting evidence (or lack thereof) for each disorder. Where possible, we seek to arrive at an integrative accounts of developmental pathways to disorder that include genetic, hormonal, and neural vulnerabilities; familial, social, and cultural risk factors; and their complex interactions across time.
Required Texts


Additional Required Readings

In addition to chapters from the Beauchaine and Hinshaw (2017) text, you will be assigned readings from the psychopathology literature each week. A tentative reading list appears below. Please check the list about a week in advance for possible updates. You are expected to read all assigned materials before class, so you are prepared for discussion.

Tentative Schedule

(hover over colored text for links to readings, when available)
1 8/23 Vasey/Beauchaine

The Developmental Psychopathology Perspective


2 8/30 Vasey

Models of Development Across the Lifespan


Beauchaine  Externalizing Disorders I: ADHD

This week we're taking things out of normal sequence because Steve Hinshaw from UC Berkeley (http://psychology.berkeley.edu/people/stephen-hinshaw) (co-editor of our text) is visiting OSU (Steve is from Columbus)! His presentation, entitled "ADHD in the 21st Century: Development, Mechanisms, Female Presentation, and Rising Prevalence" will be from 3-4 at Nationwide Children's Hospital in the Discovery Auditorium. Flyer attached (http://tpb.psy.ohio-state.edu/6853-6854/readings/Hinshaw.png).

Attendance at Steve's talk is mandaory unless your absence is pre-approved. Readings are as follows (I suggest reading in the sequence below):


Biobehavioral Reviews, 38, 125-134. doi:10.1016/j.neubiorev.2013.07.012


Brook, J. S., Brook, D. W., Zhang, C., Seltzer, N., & Finch, S. J. (2013). Adolescent ADHD and adult physical and mental health,

**Externalizing Disorders II: Conduct Disorder, Antisocial and Borderline Personality Disorders**


**Biological Vulnerability I: Genes, Gene-Environment Interdependence, and Epigenetics**


Vasey

Emotional Influences and Emotional Development


Mather, M. (2016). The affective


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**Vasey**

*Physical, Motor, Cognitive, and Perceptual Development*


**8** 10/11

**10/18** [Vasey](http://tpb.psy.ohio-state.edu/6853-6854/notes/bio2/01.asp) MIDTERM EXAM

**9**

**10/18** [Beauchaine](http://tpb.psy.ohio-state.edu/6853-6854/notes/bio2/01.asp) Regulation


**Biological Vulnerability III: Allostatis, Biological Sensitivity to Context, Teratogen Exposure, and Head Injury**


**Research Methods I: Reliability, Validity, and Hypothesis Testing**

*Beauchaine, Testing*


**The Internalizing Spectrum**


11/22  
14  
11/29  Vasey  Anxiety Disorders and Their Development II  
CLASS CANCELLED--INSTRUCTOR ILL

15  
12/6  Vasey  Obsessive-Compulsive and Related Disorders  


16 12/11 Beauchaine FINAL EXAM (4:00pm-5:45pm)

*click for notes (when available).

**Evaluation**

Your performance will be evaluated based on your scores on a mid-term exam (40%), a final exam (40%), and your thoughtful participation in class discussions (20%). The midterm and final will each cover approximately half of the material in the course. Each exam will consist of a mixture of item formats which may include brief answer (e.g., definitions) and both short and long essay questions. Grades will be based on the following cut-offs. We may adjust these cut-offs downward if evidence indicates that one or both exams were more difficult than intended.

A 90% and above
A- 85 - 89
B+ 80 - 84
B 75 - 79
B- 70 - 74
C 60 and below

You must have our permission to miss an exam, and we will only provide it in cases where illness or other documentable problems interfere with your ability to prepare for or complete the exam.

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Diversity

The Ohio State University affirms the importance and value of diversity in the student body. Our programs and curricula reflect our multicultural society and global economy and seek to provide opportunities for students to learn more about persons who are different from them. We are committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among each member of our community; and encourages each individual to strive to reach his or her own potential. Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited.

Disability Services

Students with disabilities (including mental health, chronic or temporary medical conditions) that have been certified by the Office of Student Life Disability Services (http://www.ods.ohio-state.edu/) will be appropriately accommodated and should inform the instructor as soon as possible of their needs. The Office of Student Life Disability Services (http://www.ods.ohio-state.edu/)
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<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>
Course Syllabus

Jump to Today

Lifespan Developmental Psychopathology II
(Psychology 6854)

Spring, 2018
Wed, 1:00-3:45 pm
PSC 115  (http://www.osu.edu/map/building.php?building=144)

Instructors: Theodore P. Beauchaine, Ph.D.  Michael W. Vasey, Ph.D.
Office: 135 Psychology Building 141 Psychology Building
        1835 Neil Ave 1835 Neil Ave
Office Hours: Thur, 2:30-3:30 by appointment
Phone: (614) 292-3155 (614) 292-2951
Email: beauchaine.1@osu.edu (mailto:beauchaine.1@osu.edu) vasey.1@osu.edu (mailto:vasey.1@osu.edu)
Website: http://tpb.psy.ohio-state.edu/LAP/home_.htm http://tpb.psy.ohio-state.edu/LAP/home_.htm
Class Website: https://carmen.osu.edu/  (https://carmen.osu.edu/)

Overview

This is the second of a two-part course sequence (6853, 6854) focused on the emergence and expression of psychopathology across the lifespan. The purpose of this course sequence is to familiarize you with current knowledge of psychopathology and its etiological origins across all stages of life. We will adopt a strong developmental psychopathology perspective, as introduced in Psych 6853. According to this perspective, psychopathology cannot be understood as a set of a developmental static entities. Rather, patterns of maladjustment that we often refer to as psychopathological almost always emerge from complex transactions between

https://osu.instructure.com/courses/34879/assignments/syllabus
biological vulnerabilities and environmental risk factors over time. Thus, psychopathology occurs in a developing individual, and his or her interpersonal relationships, and cannot be defined, identified, or understood without consideration of the normal course of development. Furthermore, both typical and atypical development reflect influences of a vast array of biological, psychological, and contextual variables transacting across the lifespan.

**Objectives**

This course sequence is intended to familiarize you with:

1. Foundational knowledge regarding:
   - the normal course of development in major domains of functioning (e.g., cognitive, emotional, social) across the lifespan.
   - major classes of influence (e.g., genetic, neural, hormonal, familial, cultural) on normal and abnormal development and ways they transact across the lifespan.
   - research designs and methods used to study psychopathology across the lifespan, and complexities and controversies confronted in doing such research.
   - major approaches taken to defining and classifying psychopathology across the lifespan, and limitations of each.

2. Major classes of psychopathology including information regarding:
   - prevalence, epidemiology, morbidity, mortality, and phenomenology.
   - empirically supported etiological theories, including factors that contribute to development, maintenance, progression, and amelioration of psychopathology across the lifespan.
   - issues of race and ethnicity related to phenomenology, classification, epidemiology, and etiology.

In this course, we survey varieties of psychopathology that provide good contexts for developing further mastery of major classes of influence that contribute to mental illness. We will make use of lectures, readings, video, written case examples, and discussion to promote mastery of course content. Note that treatment and assessment are covered in other courses and will not be covered in this course, except insofar as they provide insight into descriptive features or etiology of psychopathology (e.g., treatment or prevention as tests of etiological mechanisms).

**Expected Outcomes**
When you complete this course sequence, it is our expectation that you will:

have broad survey knowledge of normative development in all major domains of functioning, and be familiar with current perspectives on major classes of influence on typical psychological development across the lifespan.

understand major research designs and methods used to study psychopathology, and the strengths and limitations of each.

have knowledge of major approaches to classification of psychopathology (DSM-5 (http://www.dsm5.org/Pages/Default.aspx), factor analytic models, RDoC (http://www.nimh.nih.gov/research-priorities/rdoc/constructs/rdoc-matrix.shtml)), and their attendant strengths and weaknesses.

be able to describe all major forms of psychopathology covered in this course. Thus, you should have a solid working knowledge of DSM-5 (http://www.dsm5.org/Pages/Default.aspx), diagnostic criteria and associated information for each disorder. You will also be able to describe aspects of each disorder that are not well represented in the DSM. Included in your knowledge should be information about development, epidemiology (e.g., typical age of onset and risk factors such as age, sex, ethnicity, socioeconomic status [SES], and physical health factors, familial inheritance patterns, molecular genetic vulnerabilities, course and prognosis, subtypes, and common comorbid conditions).

understand current etiological theories and their supporting evidence (or lack thereof) for each disorder. Where possible, we seek to arrive at a integrative accounts of developmental pathways to disorder that include genetic, hormonal, and neural vulnerabilities; familial, social, and cultural risk factors; and their complex interactions across time.

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**Required Texts**


https://osu.instructure.com/courses/34879/assignments/syllabus

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**Additional Required Readings**

In addition to chapters from the [Beauclaire and Hinshaw](https://www.wiley.com/en-us/Child+and+Adolescent+Psychopathology%2C+3rd+Edition-p-9781119169970) (2017) text, you will be assigned readings from the psychopathology literature each week. A tentative reading list appears below. Please check the list about a week in advance for possible updates. You are expected to read all assigned materials before class, so you are prepared for discussion.

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**Tentative Schedule**

(hover over colored text for links to readings, when available)

<table>
<thead>
<tr>
<th>WEEK</th>
<th>DATE*</th>
<th>INSTRUCTOR</th>
<th>TOPIC AND READINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/10</td>
<td>Beauclaire</td>
<td>Research Methods II: History of Classification, the DSM, Empirically-based Taxonomies, and the Research Domain Criteria</td>
</tr>
</tbody>
</table>


Please also read the following:

NiMH Strategic Research Priorities  (https://www.nimh.nih.gov/about/strategic-planning-reports/strategic-research-priorities/index.shtml) , including Objectived 1-4 on the left menu.

NiMH Research Areas  (https://www.nimh.nih.gov/research-priorities/research-areas/index.shtml) , including all bullet points (except Small Bussiness).


an additional important reference/resource:


Beauchaine Research Methods III: Base Rates, Clinical Judgement, Cognitive Biases, and Psychodiagnosis


additional important references/resources:

42, 757-786.


**Generalized Anxiety Disorder, OCD Spectrum I**


Somatoform and Sleep Disorders

Somatoform


Sleep


6 2/14  (http://tpb.psy ohio-state.edu/6853-6854/notes/substance_abuse/01.htm)  Beauchaine  Substance Use Disorders


an additional important reference/resource:


**MIDTERM EXAM**

Beauchaine *Schizophrenia Spectrum Disorders*


Giakoumaki, S. G. (2012). Cognitive and prepulse inhibition deficits in psychometrically high schizotypal


Beauchaine

**Bipolar Spectrum Disorders**


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<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Instructor</th>
<th>Topic</th>
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<tbody>
<tr>
<td>10</td>
<td>3/12-16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>3/21</td>
<td>Vasey</td>
<td>Trauma- and Stressor-related Disorders</td>
</tr>
<tr>
<td>12</td>
<td>3/28</td>
<td>Vasey</td>
<td>Depressive Disorders I</td>
</tr>
<tr>
<td>13</td>
<td>4/4</td>
<td>Vasey</td>
<td>Depressive Disorders II, Eating Disorders</td>
</tr>
</tbody>
</table>

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4/18  (http://tpb psyhio-6853-6854/notes/ASD01.asp)  

Beauchaine  Autism Spectrum Disorder


**16**  **4/26**

**FINAL EXAM (Thur, 12:00-1:45pm)**

*click for notes (when available).

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**Evaluation**

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[https://osu.instructure.com/courses/34879/assignments/syllabus](https://osu.instructure.com/courses/34879/assignments/syllabus)
In this course, we will focus on the psychology and neuroscience underlying choice behavior. We will start with a brief “crash course” in neuroscience basics, then go on to cover various domains of decision making and what Neuroeconomics has taught us about them. Topics will include decisions about risk, time discounting, social distribution, strategy in games, and learning. By the end of the course, students should understand the basics of how the brain works, how these neural functions produce choice behavior, and the relationship between classic behavioral models and models of how the brain works.

Prerequisites
This course is designed for undergraduates with some exposure to economic theory, decision making, or neuroscience. Prerequisites include: (Stats 1450 or Stats 2450 or Psych 2220 or Econ 3400 or ADEEcon 2005) AND (Math 1150 or higher) AND (Econ 4001 or Psych 4508 or Psych 3313 or Psych 3513 or ADEEcon 4001).

Suggested Textbook and Readings
Grading Policies

The Big Picture

• Grades will be determined on the basis of the following components:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam 1</td>
<td>25% (could be 20%, 25%, or 30%; see below)</td>
</tr>
<tr>
<td>Exam 2</td>
<td>25% (could be 20%, 25%, or 30%; see below)</td>
</tr>
<tr>
<td>Exam 3</td>
<td>25% (could be 20%, 25%, or 30%; see below)</td>
</tr>
<tr>
<td>Problem sets</td>
<td>20%</td>
</tr>
<tr>
<td>In-class pop quizzes</td>
<td>8% (5% + up to 3% bonus; see below)</td>
</tr>
</tbody>
</table>

• Grades for all components of the course will be converted to percentages and averaged using the weights given above. Your final grade will be computed using the scale below.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>&lt;60%</td>
</tr>
<tr>
<td>D</td>
<td>≥60% &lt;67%</td>
</tr>
<tr>
<td>D+</td>
<td>≥67% &lt;70%</td>
</tr>
<tr>
<td>C–</td>
<td>≥70% &lt;73%</td>
</tr>
<tr>
<td>C</td>
<td>≥73% &lt;77%</td>
</tr>
<tr>
<td>C+</td>
<td>≥77% &lt;80%</td>
</tr>
<tr>
<td>B–</td>
<td>≥80% &lt;83%</td>
</tr>
<tr>
<td>B</td>
<td>≥83% &lt;87%</td>
</tr>
<tr>
<td>B+</td>
<td>≥87% &lt;90%</td>
</tr>
<tr>
<td>A–</td>
<td>≥90% &lt;93%</td>
</tr>
<tr>
<td>A</td>
<td>≥93%</td>
</tr>
</tbody>
</table>

Exams

• Exams will be in class, closed book, and closed notes. Questions will probably be a mix of multiple-choice, short-answer, and discussion. Some calculations will be required, so bring a calculator (but not a cell phone or a laptop).

• In problems that require calculations, you must show your work and/or clearly explain what you did to get your answer. Just writing down your final answer is insufficient, even if your answer is correct. (This rule does not apply to multiple choice questions.)

• The second and third exams will focus on material covered in the relevant parts of the course, so they will not be a “cumulative” by design. However, they will be at least somewhat cumulative by necessity (i.e., you shouldn’t forget earlier material).

• I am happy to consider written requests for re-grades, if those requests are received within one week of my returning the graded exam. I will re-grade only that portion of the exam specified in the written request. It is possible for re-grading to lead to a lower grade rather than a higher grade.

• Your best exam grade (in percentage terms) will be weighted 30% and your worst exam grade will be weighted 20%. The other exam will be weighted 25%. These weights will be determined separately for each student at the end of the semester. The total is 75% no matter how you slice it. This policy is intended to take a bit of the sting out of one poor performance, but it won’t do much for a string of low scores.

Homework Assignments

• There will be about six written problem sets during the course. These are intended as practice and will often involve calculations. They will usually be handed out during one class period and be due at the beginning of class 5 or 7 days later. Occasionally, a problem set may include some material that is covered only 2 days before the due date.

• Collaboration on problem sets is encouraged.

• Problem sets will be graded on a 0–2 “good effort” scale, where 0 = missing, 1 = handed in but unsatisfactory, and 2 = satisfactory. If you don’t make a serious effort, you can expect a grade lower than 2.
• Your lowest grade on these problem sets will be dropped, but late problem sets will not be accepted. If you miss a problem set for a legitimate reason, just count that one as your drop grade.

**In-Class Pop Quizzes**

• There will be several in-class pop quizzes during the semester. I don’t know the exact number, but an average of one every two or three lectures would be a good guess. The final number of quizzes may be higher or lower than the number of quizzes currently listed on Carmen.

• Quizzes will not be announced ahead of time. If you ask me if I’m planning to give a quiz on a particular day, I will not tell you.

• Quizzes may be given at any time during the lecture (beginning, middle, or end). They may cover material from that day, material from the previous lecture, or both.

• You must be present to take the quiz. There are no make-ups.

• The quizzes are intended to be straightforward, but not trivial. If you are present and paying attention you should get most of the answers correct.

• The quizzes will count as 8% of your grade. The first 5% is like any other component of your grade. Anything more than that is bonus. So in principle, you can get 103% in the course. But if you miss all of the quizzes, the best you can do is 95%.

• Among other things, the bonus is intended to make the “no make-ups” policy reasonable. If you miss one or two quizzes, even for legitimate reasons, don’t worry about it.

• If you are philosophically opposed to pop quizzes and want no part of this nonsense, send me an email before the start of class on the date of Exam 1 saying that you do not want the pop quizzes to be part of your grade. If you send me such an email, I will compute your grade on the basis of the other 95% of the course and scale your grade up from 95% to 100% by dividing your average by 0.95 (really, it works). If you opt out of the pop quizzes, then none of them will count and you will not be eligible for the 3% extra credit. The decision to opt out of the quizzes is irreversible (i.e., you can’t opt back in later).

**Exceptions Due to Legitimate Illness, Injury, or Serious Emergency**

Students missing an exam or other deadline because of legitimate illness, injury, or serious emergency must do both of the following things:

1. Contact me in person or by email **before** the exam or deadline.

2. Provide written documentation of your illness, injury, or emergency from an authoritative source (e.g., a physician’s note, a police report, a funeral announcement).

Remedial actions (if any) are at my discretion. Make-up exams and deadline extensions are not guaranteed, even if both of the above actions are taken. Make-up exams typically involve different questions and problems than those on the original exam.

Sleeping through an exam is not considered a legitimate excuse.

No make-ups will be offered for missed pop quizzes (the bonus is intended to provide a bit of a cushion in such cases). You do not need to contact me to say that you will be missing a quiz if there is one. My standard response to your missing a homework assignment will be that you can count that one as your drop grade.
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## Tentative Course Outline

*Note:* This schedule is subject to change.

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<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic and Event</th>
<th>Reading/Problem Sets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jan 10</td>
<td>Overview of Course</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jan 12</td>
<td>Normative decision making</td>
<td>G&amp;F 1</td>
</tr>
<tr>
<td>2</td>
<td>Jan 17</td>
<td>Experiments in decision making</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jan 19</td>
<td>Multi-attribute choice</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Jan 24</td>
<td>Speed-accuracy tradeoff</td>
<td>G&amp;F 3</td>
</tr>
<tr>
<td></td>
<td>Jan 26</td>
<td>Introduction to neuroscience</td>
<td>G&amp;F 5</td>
</tr>
<tr>
<td>4</td>
<td>Jan 31</td>
<td>Introduction to neuroscience (continued)</td>
<td><em>Problem Set 1 due</em></td>
</tr>
<tr>
<td></td>
<td>Feb  2</td>
<td>Methods of neuroscience</td>
<td>G&amp;F 6</td>
</tr>
<tr>
<td>5</td>
<td>Feb  7</td>
<td>Simple choice</td>
<td>G&amp;F 8</td>
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<tr>
<td></td>
<td>Feb  9</td>
<td>Simple choice (continued)</td>
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<tr>
<td>6</td>
<td>Feb 14</td>
<td>Risk &amp; Uncertainty</td>
<td>G&amp;F 9, <em>Problem Set 2 due</em></td>
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<td>Feb 16</td>
<td>Exam 1</td>
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<td>7</td>
<td>Feb 21</td>
<td>Prospect theory</td>
<td>G&amp;F Appendix</td>
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<td>Feb 23</td>
<td>Prospect theory (cont.)</td>
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<tr>
<td>8</td>
<td>Feb 28</td>
<td><em>NO CLASS</em></td>
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<tr>
<td></td>
<td>Mar  2</td>
<td>Intertemporal choice and self-control</td>
<td>G&amp;F 10</td>
</tr>
<tr>
<td>9</td>
<td>Mar  7</td>
<td>Social preferences</td>
<td>G&amp;F 11, <em>Problem Set 3 due</em></td>
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<tr>
<td></td>
<td>Mar  9</td>
<td>Social preferences (continued)</td>
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<td>10</td>
<td>Mar 14</td>
<td><em>Spring Break</em></td>
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<td></td>
<td>Mar 16</td>
<td><em>Spring Break</em></td>
<td></td>
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<tr>
<td>11</td>
<td>Mar 21</td>
<td>Pharmacology</td>
<td>G&amp;F 14, <em>Problem Set 4 due</em></td>
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<tr>
<td></td>
<td>Mar 23</td>
<td>Exam 2</td>
<td></td>
</tr>
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<td>12</td>
<td>Mar 28</td>
<td>Reinforcement learning</td>
<td>G&amp;F 15</td>
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<td>Mar 30</td>
<td>Reinforcement learning (continued)</td>
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<td>13</td>
<td>Apr  4</td>
<td>Reinforcement learning (continued)</td>
<td></td>
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<tr>
<td></td>
<td>Apr  6</td>
<td>Perception in decision making</td>
<td>G&amp;F 20, <em>Problem Set 5 due</em></td>
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<td>14</td>
<td>Apr 11</td>
<td>Context-dependence</td>
<td>G&amp;F 24</td>
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<td>Apr 13</td>
<td>Context-dependence (continued)</td>
<td></td>
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<tr>
<td>15</td>
<td>Apr 18</td>
<td>Strategic choice &amp; game theory</td>
<td>G&amp;F 2</td>
</tr>
<tr>
<td></td>
<td>Apr 20</td>
<td>Strategic choice &amp; game theory (continued)</td>
<td>G&amp;F 25 , <em>Problem Set 6 due</em></td>
</tr>
</tbody>
</table>

**Finals**

*Exam 3*

2:00 - 3:45pm
Introduction to Mathematical Models in Experimental Psychology, Fall 2017, Class number 6609
Roger Ratcliff, Rm. 291B Psych. Bldg., Class meets: Wed. 1:30-4:15 Rm. 117 Psych. Bldg.

Course Objectives: This course provides an introduction to basic cognition with a focus on modeling based approaches. There will be evaluation of models of processing and representation, where reasonable models exist. Models and approaches that are highly relevant today (from the last 40 years of research) will be presented. There will also be a module (3 classes) on model fitting and data analysis. This is aimed at providing information about statistics, experimental design, and data analysis that is not commonly found in text books, i.e., what to do in situations where the text books provide no guidance. The course will require preparation prior to each class: reading chapters from the textbook and 2-4 original papers from the literature. These will require significant effort and short summaries of the readings will be collected each week if there is evidence that the readings have not been done. All the work is presented with the aim of showing both the good and bad points of the models and approaches. The last class presents an evaluation of the state of this research area of cognitive psychology. For the various models examined, we will ask questions such as: 1. How good is the model? 2. Is it fundamentally rejected in the core assumptions? 3. Is it worth using in applied/practical domains?

Student Evaluation
Students will be expected to present 1-2 articles (or parts of articles) (10%), write up results (briefly) from four statistics exercises (5% each) two computer simulation experiments (1-2 pages plus graphs) (two at 15% each), and three research papers (first two 10% last one 20%). Students will be evaluated on an absolute scale.

Topics
Aug. 23: Introduction, Modal memory model, STM, LTM. (Read Chs. 1,2 (iconic memory section only),3,4, N&S). Separating STM and LTM (Ch 3,4, N&S), Levels of processing (Ch. 5, N&S).

Aug. 30: Critiques of levels of processing, Forgetting (Ch. 6, N&S). Cue dependent forgetting, Implicit memory. (Baddeley, 1978; Tulving, 1974; Ch. 7, N&S). Implicit memory experiment.

Sept. 6: Introduction to R. Distributions, plotting, means, medians, standard deviations, variability within and between subjects, hypothesis testing vs. exploration vs. modeling. Sampling distributions, normal distribution and binomial, central limit theorem, power of tests, t-tests, chi-square and F distributions, chi-square tests, generating random numbers from the distributions, qq plots. Readings Hays chs. 2,3,4,6,8,9. R book by Navarro as a reference.


Sept. 20: Exploratory data analysis. Outliers. Outlier detection and criteria for detection, elimination, treatment as special cases. 5-number summaries, histograms, stem and leaf plots, etc. Fitting a line to data. Relationships between variables. Linear Regression (fitting a line to data traditionally), robust regression, measurement error. Homework 2 due.

Sept. 27: Recognition memory, Introduction to global memory models (Ch. 8, 9, Optional Ch., N&S; Ratcliff & McKoon, 1996; Gillund & Shiffrin, 1984). Global memory models, rejection.


Nov. 15. Categorization, instance based models, decision bound models, connectionist models, hybrid models, integral/separable dimensions (Nosofsky, 2011; Soto & Ashby, 2017; Erickson & Kruschke, 1998; Rouder & Ratcliff, 2004).


Lab. component of the course. This involves taking part in about four or five 20 minute experiments with data analyzed in class and discussion of intuitions about processing. One experiment encourages students to cheat to see if the analysis techniques of the instructor can uncover strategies that uncooperative students might adopt. There are also two computer simulation exercises that use computer programs already developed: students alter parameters of the models to represent changes in processes that the models are designed to mimic.

Teaching Method.
Classes will be part lecture and part discussion/tutorial. There will be a number of in-class demonstrations. Students will participate in experiments in the lab. to provide data for examination in class. The course will be flexible so as to reduce emphasis on some topics and spend more time on others depending on demand, background, interest, etc.

Paper 1. Evaluate a model of implicit memory, OR Contrast the implicit memory views, OR Evaluate a global memory model, OR examine an application of a global memory model. (OR you can negotiate). Make this shortish, 5 pages.

Paper 2. Find the strangest application of diffusion decision models that you can and write a 2-3 page paper about it. Answer questions: Is the model fitting valid? Does the model fit? Is the application appropriate (evaluate it)?

Paper 3. Topics. Any topic from what was studied but with a theory or model based interpretation


Office Hours: I am in most of the time, say 9:30 to 4:00 MTWF. Office hours by appointment (use email ratcliff.22@osu.edu). If I am in (i.e., I have not wandered off) I am available. Call or email to be sure I am in (you can chance it of course and drop by).

I will probably update the course as I find out what interests there are in the class.

Academic Misconduct
All students at the Ohio State University are bound by the Code of Student Conduct (see http://oaa.ohio-state.edu/coam/code.html). Violations of the code in this class will be dealt with according to the procedures detailed in that code. Specifically, any alleged cases of misconduct will be referred to the Committee on Academic Misconduct. It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct.

Sexual misconduct/relationship violence:
Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at http://titleix.osu.edu or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu

Disability Services:
The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.
Judgment and Decision Making (Psych 7708)

Spring 2018
Syllabus

Instructor: Mike DeKay
Office: Lazenby Hall, room 224
E-mail: dekay.3@osu.edu
Phone: 614-292-1837
Mailbox: By room 224 in Lazenby Hall
Office hours: Monday, 2:00–3:30 p.m. or by appointment

Class meetings: Tuesday and Thursday, 2:20–3:40 p.m.
Psychology Building, room 115

Overview

This is a graduate-level course on judgment and decision making (JDM). We will focus on “descriptive” psychological models of how people actually make judgments and decisions, but we will also cover some “normative” models of how people should make judgments and decisions. Although the emphasis will be on empirical research findings from the psychology literature, we will occasionally discuss applications or assessments in other fields (e.g., medicine, law, or business). Students are encouraged to speak up regarding connections to their own areas of expertise.

Prerequisites

Students should have taken a graduate-level statistics course or be currently enrolled in such a course. If you do not meet this prerequisite, you should probably postpone taking this course until a later date.

Required Readings

- Various articles and chapters will be posted to Carmen as PDF files on a regular basis. There will usually be two to four readings per week.
- There is no required text. If you would like some additional background on JDM, I suggest the following books:
  - Newell, B. R., Lagnado, D. A., & Shanks, D. R. (2015). *Straight choices: The psychology of decision making*. New York: Psychology Press. This is a more up-to-date book written at a slightly higher level. It relies a bit more on cognitive and learning psychology.
  - Koehler, D. J., & Harvey, N. (Eds.). (2004). *Blackwell handbook of judgment & decision making*. Malden, MA: Blackwell Publishing. This handbook has relatively up-to-date chapters on many (but not all) major threads in JDM research. Unlike many other edited volumes on JDM, the chapters in this one are not reprints or minor updates of...
journal articles. There is also an updated, expanded (to two volumes), and more expensive version edited by Keren and Wu (2015).

**Lecture Notes**

Lecture notes will be posted to Carmen before class. I will also try to make copies and bring them to class.

**Grading Policies**

*The Big Picture*

- Grades will be determined on the basis of several components:
  
<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Homework assignments</td>
<td>30%</td>
</tr>
<tr>
<td>Unannounced quizzes</td>
<td>25%</td>
</tr>
<tr>
<td>Article discussion leader</td>
<td>15%</td>
</tr>
<tr>
<td>Discussion questions</td>
<td>20%</td>
</tr>
<tr>
<td>Class participation</td>
<td>10%</td>
</tr>
</tbody>
</table>

- The final grade distribution will be typical of distributions for graduate courses in psychology.

*Homework Assignments*

- There will be several (eight or ten?) homework assignments. These will be a mix of quantitative topics, discussion questions on readings or class material, and perhaps short “reaction papers” to specific readings.
- You may collaborate on these assignments, but you must turn in your own work. The only exception is the first problem set, which is a questionnaire that is to be completed individually, without collaboration.
- Late problem sets will incur a 10% penalty if less than 24 hours late, a 20% penalty if 24–48 hours late. No credit will be given after that. Your lowest grade on these problem sets (in percentage terms) will be dropped. If you miss a problem set for a legitimate reason, just count that one as your drop grade.

*Unannounced Quizzes*

- There will be several unannounced quizzes (pop quizzes) during the semester. I don’t know the exact number, but an average of one every three lectures would be a good guess. The quizzes may be given at any point during the class period (beginning, middle, or end).
- The quizzes are intended to be straightforward, but not trivial. If you do the reading and pay attention in class, you should get most of the answers correct. Most or all of the questions will be true/false or multiple choice.
- Your lowest quiz grade (in percentage terms) will be dropped. If you miss a quiz, just count that one as your drop grade.

*Article Discussion Leader*

- At some point during the semester, you will lead a class discussion on a journal article related to one of the topics listed in the course outline. I will provide you with a relevant paper and other students will submit discussion questions ahead of time.
- This a discussion, not a presentation. So no slides. It should generally take no more than 15 minutes. Some short papers could take less time.
• When leading the discussion, you should not summarize the article, because everyone will have read it. Instead, focus on the more interesting theoretical or experimental aspects of the article, including any shortcomings or interpretational issues. Don’t rely entirely on the rest of the class (“So, what did you guys think of it?”).

Discussion Questions
• Some classes will have readings that are flagged as “discussion articles” (see above). Before such classes, you should submit one discussion question for that reading. These should not be clarifying questions (though you may ask those in addition), but rather questions to start a discussion about the article.
• Questions should be submitted to Carmen by 5 p.m. on the day before class, so that we can use them to launch the discussion.
• Even if an article is not a “discussion article,” you should read it before class anyway, as that will make the lectures and discussions more valuable. All assigned articles are fair game for unannounced quizzes.
• I reserve the right to require a discussion question for every reading. I will consider this option only if it appears that students are not doing the reading ahead of time.

Class Participation
• You are expected to be actively involved in the class. To be involved, you must first be present. Attendance is mandatory. You can have one freebie, but additional unexcused absences will affect your grade.
• Beyond attendance, you should contribute to class regularly. Obviously, not everyone will ask a question or make a comment in every class period, but you should contribute whenever you can.

Academic Misconduct
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For good, concise, plain-English advice on how to stay out of academic trouble, see Ten Suggestions for Preserving Academic Integrity at http://oaa.osu.edu/coamtensuggestions.html

Sexual Misconduct and Relationship Violence
Title IX makes it clear that violence and harassment based on sex and gender are civil rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at http://titleix.osu.edu or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu.

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The university strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you
register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds.osu.edu; 614-292-3307; VRS (Video Relay Service) 614-429-1334; 098 Baker Hall, 113 W. 12th Avenue. To ensure fairness to all students, requests for special accommodations will typically not be granted in the absence of SLDS certification.

**Tentative Course Outline**

*Note:* This outline is subject to change. Don’t expect the topics and lectures to line up neatly with class periods. Asterisks indicate topics with articles suitable for student-led discussions.

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic or Event</th>
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<tbody>
<tr>
<td>1</td>
<td>Jan 9</td>
<td>Overview of course; Expected value, expected utility</td>
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<tr>
<td></td>
<td>Jan 11</td>
<td>Risk preferences, decision trees, sunk costs</td>
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<td>2</td>
<td>Jan 16</td>
<td>SEU axioms and violations</td>
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<td></td>
<td>Jan 18</td>
<td>Prospect theory</td>
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<td>3</td>
<td>Jan 23</td>
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<td></td>
<td>Jan 25</td>
<td>Multiattribute utility</td>
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<td>4</td>
<td>Jan 30</td>
<td>*Heuristics and biases in multiattribute choice</td>
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<td></td>
<td>Feb 1</td>
<td>*Constructed preferences, experienced utility</td>
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<tr>
<td>5</td>
<td>Feb 6</td>
<td>*Awareness, unconscious decision making</td>
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<td></td>
<td>Feb 8</td>
<td>Bayes’ theorem</td>
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<td>6</td>
<td>Feb 13</td>
<td>*Bayes’ theorem</td>
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<tr>
<td></td>
<td>Feb 15</td>
<td>*Heuristics and biases</td>
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<tr>
<td>7</td>
<td>Feb 20</td>
<td>*More heuristics and biases</td>
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<td></td>
<td>Feb 22</td>
<td>*More heuristics and biases</td>
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<td>8</td>
<td>Feb 27</td>
<td>*More heuristics and biases</td>
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<td>Mar 1</td>
<td>*The lens model, humans vs. models</td>
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<td>9</td>
<td>Mar 6</td>
<td>*Fast and frugal heuristics</td>
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<td>Mar 8</td>
<td>*Fast and frugal heuristics</td>
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<td>10</td>
<td>Mar 13</td>
<td>Spring break <em>No class</em></td>
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<td></td>
<td>Mar 15</td>
<td>Spring break <em>No class</em></td>
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<td>11</td>
<td>Mar 20</td>
<td>Signal detection theory</td>
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<td>Mar 22</td>
<td>*Perceptions of chance and cause</td>
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<td>12</td>
<td>Mar 27</td>
<td>*Overconfidence</td>
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<td></td>
<td>Mar 29</td>
<td>*Debiasing, accountability</td>
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<td>13</td>
<td>Apr 3</td>
<td>*Temporal decision making</td>
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<td></td>
<td>Apr 5</td>
<td>*Repeated decisions, decisions from experience</td>
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<td>14</td>
<td>Apr 10</td>
<td>*Affect and decision making</td>
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<td>Apr 12</td>
<td>*Affect and decision making</td>
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<tr>
<td>15</td>
<td>Apr 17</td>
<td>*Affect and risk perception</td>
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<td></td>
<td>Apr 19</td>
<td>*Risk perception</td>
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Neuroscience 5644: Behavioral Endocrinology
(3 credits)

SYLLABUS
Autumn 2017

Class meets @ 11:10-12:30 on Mondays and Wednesdays in 1165 Graves Hall

Instructor:
Professor Randy Nelson
Office: 4084 Graves Hall
Office Hours: Thursday 11:30-12:30 pm and by appointment
Phone: 614.688.8327
Fax: 614.688.8742
Email: rnelson@osu.edu

Course Summary: Exploration of the interactions among hormones, brain, and behavior through an integrative approach.

Prerequisite: Psychology 3313 or graduate student standing. Not open to students with credit for Psych 4644 (or 644).

Grading: Students must attend and actively participate in all class meetings. The students’ final grades will reflect their participation (10%), as well as performance on a midterm examination (20%), in-class quizzes (10%), in-class presentation (25%), and a term paper (35% [10% for comprehensive outline; 25% for final paper]). The instructor must approve the topic of your paper by class time on 13 September 2017. A comprehensive outline of your term paper (primary references included) is due by 16 October 2017 (10% of final grade). Students must complete the term paper by class time on 6 December 2017. The term paper is worth 25% of your final grade. Late papers will NOT be accepted under any circumstances. The topic of your term paper will also be the topic of your in-class oral presentation (25% of final grade). There are NO make-up quizzes or exams. The midterm exam will be given to the students at the end of class on 16 October 2017. The completed exams are due at the beginning of class on Wednesday 18 October 2017. The exam material will consist of both lecture material and material from your readings. The tests are multiple-choice, short answer, and essay examinations. Students will be responsible for attending class, reading the assigned materials in the reader, and studying the materials. Final grades will be calculated as follows: ≥90% of the highest score = A range; ≥80% of the top score = B range; ≥70% of the top score = C range; ≥60% of the top score = D range. <59% of the top score = F.

Academic Ethics: All students enrolled in courses at the Ohio State University should be familiar with the University's policy on academic integrity (https://oaa.osu.edu/coamFAQS.html). The instructor and course assistants are committed to maintaining a fair assessment of student performance in this course. There are two major ethical considerations in this course. The quizzes are closed book. No notes may be used during the examinations and you may not confer with your fellow students or look at other examinations for answers during the quiz period. Notes and other materials may be used during the take-home examination, but you may not confer with your fellow students during the completion of the exams. Prior to the exams and quizzes, all students are encouraged to study in small groups to facilitate preparation for the tests. However, once you begin the quizzes or examination, you are expected to work alone. Second, the term paper must represent your own work. A comprehensive website that describes most aspects of plagiarism has
be produced by Purdue University (https://owl.english.purdue.edu/owl/resource/589/01/). I strongly encourage you to visit this site. Papers will be checked electronically (Turnitin) for plagiarism.

**Absence from Exams:** Make-up exams and quizzes may be taken only in cases in which absence from the scheduled exam is unavoidable, such as in cases of illness or family emergency. Any such absence must be approved by the instructor in advance of the exam. Any excuse for an absence must be documented and reported to the instructor as soon as possible. Undocumented absences from the scheduled quizzes or exams will result in 0 points for that missed item. Students are also expected to abide by the Code of Student Conduct as outlined in the University Student Handbook (https://oaa.osu.edu/coamfaqs.html).

A recent American College Health Survey found stress, sleep problems, anxiety, depression, interpersonal concerns, death of a significant other, and alcohol use among the top ten health impediments to academic performance. Students experiencing personal problems or situational crises during the quarter are encouraged to contact the OSU Counseling and Consultation Service (614-292-5766; www.ccs.osu.edu) for assistance, support and advocacy. This service is free and confidential.

**Accommodations for Disabled Students:** The policy of The Ohio State University is to provide every reasonable, appropriate, and necessary accommodation to qualified disabled students. The University's colleges and academic centers evaluate and judge applications on an individual basis and no categories of disabled individuals are automatically barred from admission. The privacy rights of each disabled person are honored to the fullest extent possible. The University's interest in a students disabilities are only for the purpose of accommodating his/her specific disability, thereby providing an academically qualified disabled student access to programs and activities accorded all other qualified students. Whenever generally accessible facilities do not adequately accommodate a specific disability, the University makes every reasonable accommodation and program or facility adjustment to assure individual access. These policies are fully supported and practiced in this class. If you have a disability documented with The Ohio State University Office of Disability Services (http://www.ods.ohio-state.edu; 614.292.3307, or visit 150 Pomerene Hall), then please contact the instructor privately by the end of the second week of the semester so that any accommodations (e.g., large font exams, separate examination facilities) can be made (contact information is listed above).

**Recommended Textbook:** *Introduction to Behavioral Endocrinology* (2017), Fifth Edition; Nelson, R.J. & Kriegsfeld, L.J.; Sinauer Associates. Sinauer and Associates. Instructor-provided readings will also be used (see below).

**Important!** If you are having difficulty with any of the material, either in lecture or in the readings, then please see the instructor for help. The instructor is here to facilitate your learning, and that means not only giving lectures, but also consulting with you individually. The semester is very short, so it is critical to seek assistance as soon as you detect a problem.
<table>
<thead>
<tr>
<th>Date</th>
<th>Lecture Topic</th>
<th>Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 23 August</td>
<td>Introductions, Course Organization and Overview; Strong Inference</td>
<td>Platt (#1) Chapter 1</td>
</tr>
<tr>
<td>2 28 August</td>
<td>Endocrine physiology and organs; neuroendocrinology</td>
<td>Chapter 2</td>
</tr>
<tr>
<td>3 30 August</td>
<td>Sexual differentiation: historical perspective; anatomy and physiology</td>
<td>Chapter 3</td>
</tr>
<tr>
<td>4 6 September</td>
<td>No Class-Labor Day Holiday</td>
<td></td>
</tr>
<tr>
<td>5 11 September</td>
<td>Sexual differentiation: behavioral analysis &amp; mediating mechanisms,</td>
<td>Chapter 4</td>
</tr>
<tr>
<td>6 13 September</td>
<td>Sexual differentiation: behavioral analysis &amp; mediating mechanisms, bird song</td>
<td>Chapter 4</td>
</tr>
<tr>
<td>7 18 September</td>
<td>Sex differences in behavior (Quiz 1)</td>
<td>Chapter 4</td>
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<tr>
<td>8 20 September</td>
<td>Male sex behavior</td>
<td>Chapter 5</td>
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<tr>
<td>9 25 September</td>
<td>Female sex behavior</td>
<td>Chapter 6</td>
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<tr>
<td>10 27 September</td>
<td>Female sex behavior</td>
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<td>11 2 October</td>
<td>Parental behavior</td>
<td>Chapter 7</td>
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<tr>
<td>12 4 October</td>
<td>Parental behavior</td>
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<tr>
<td>13 9 October</td>
<td>Social behavior</td>
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<tr>
<td>14 11 October</td>
<td>Biological Rhythms</td>
<td>Chapter 10</td>
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<tr>
<td>16 October</td>
<td>Midterm Exam handed out in class (25% of final grade) OUTLINES DUE</td>
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<tr>
<td>Date</td>
<td>Event</td>
<td>Chapter</td>
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<tr>
<td>18 October</td>
<td>Midterms due at the start of class (25% of final grade) Hormones and learning</td>
<td>Chapter 12</td>
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<tr>
<td>15 23 October</td>
<td>Stress</td>
<td>Chapter 11</td>
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<tr>
<td>25 October</td>
<td>Hormones and mood, seasonal affective disorder, PMS</td>
<td>Chapter 13</td>
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<tr>
<td>30 October</td>
<td>Student Presentations</td>
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<td>23 27 November</td>
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<tr>
<td>25 4 December</td>
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</tr>
<tr>
<td>26 6 December</td>
<td>(Quiz 2)</td>
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**Reading List (Readings available on Canvas)**

**Lecture 1:**

**Instructions for Term Paper:** The scientific literature for the biology of aggression and violence is extensive and diverse. It is often necessary to scan many articles quickly and to extract from them the essential message. It is frequently necessary to evaluate methods in order to determine if the claims in the paper are extravagant. Even with careful reviewing, articles are published that may not be tightly reasoned and frequently, alternative explanations for data are not considered. Your term paper should critically examine some problem of current interest in biological approaches to the study of aggressive behavior. You have considerable freedom in terms of the approach you use. However, you must use only primary research literature (you can use review articles as points of departure) and you must be critical (exercise careful judgment) in your approach. You might want to examine the development of a particular concept during the past several years by choosing a paper from 10 or so years ago and then picking a very recent paper for comparison. Alternatively, you might pick a controversial topic and examine different points of view based on different scientific methodologies, philosophies or as alternative explanations for similar observations. There is no desire on my part to limit your options; you may be able to think of some other approaches. Do not approach this assignment with the idea that there is something wrong with the papers you read. A critic is one who expresses a reasoned opinion on a matter, involving a judgment of its logical bases, correctness, value or significance. Give the reader sufficient information so that your arguments can be followed and your
opinions understood, but do not abstract papers being discussed (i.e., do not write..."Fox and Hound (1985) found X. This was wrong. Cole and colleagues found Y. This was right."). Rather, focus on issues that attract your attention and present a comparative analysis. You might start by reviewing the journals, Aggressive Behaviour, Behavior Genetics, Hormones and Behavior, Physiology & Behavior or Behavioural Brain Research. You might also get ideas from your readings, Psychlit, or Medline. Once you find an article of interest, explore its references for other articles of related interest. Use Science Citation Index for determining the researchers who are citing papers of interest to you. The paper is very important to your final grade. Present it in good form, underlining or italicizing scientific names and using the literature citation format of the APA (an APA manual of style will be placed on reserve at the library). Please do not write less than 12 or more than 20 double-spaced pages.

I expect all of your arguments to be supported by sufficient references. Your grade on the paper will be based on my assessment of your critical abilities, the originality of your treatment, your presentation (including grammar, syntax, and spelling), and the total development of the paper. The instructor will gladly help you with any aspect of your term paper. I expect you to work on this paper during the entire term and my evaluations of the final product will be based on those expectations. You may also seek assistance from the Center for the Study and Teaching of Writing (CSTW) on campus, an interdisciplinary support and research unit in The Ohio State University's College of Humanities. The writing lab is located in 485 Mendenhall Laboratory (which is on the South side of the oval, next to Hegarty Hall), and students can schedule appointments on their website (www.cstw.org) or by calling 614-688-4291. Failure to complete the term paper will result in a failing grade. A comprehensive outline of your term paper is due in class on 16 October 2017. This outline should include the thesis of your term paper, as well as a list of the major references that you have consulted (3-5 review papers and 8-12 research papers).

Instructions for Presentation: These instructions are to help you organize your presentation. Most of the instructions are NOT REQUIRED, but highly recommended. For a presentation to be successful, you need to consider:

1. **What material to present:** The purpose of a presentation is to convey information. You need to know the general background as well as specific aspects of the topic. For example, you need to know the overview of gene-behavior interactions, as well as a specific aspect of the topic such as increased aggression in males of human families lacking monoamine oxidase A despite elevated serotonin. Your presentation will be an oral report on the topic of your term paper so presumably you will have done a lot of background reading.

2. **How to organize the material:** Organized information is easier to remember for you as you present and easier for your audience to understand. Do not simply read your term paper; an organized outline or a list is much easier to write and more useful for a presentation.

3. **How to present the information:** There are many ways to present material in an interesting manner. The best format is the one that allows you to convey information clearly. A controversial topic might require a debate format, and statistics might be presented best graphically, etc.

4. **How to search the existing literature:** You need to know what information is available, as well as “hot” or controversial topics in the field (see instructions for term paper). To gain a comprehensive view of the field, you should begin with a book chapter or a review article. Use the reference sections from those to find more detailed information. I have some start-up materials in my office (books, articles, etc.) that you can borrow. You can also get a lot of feedback from me at any point during the preparation. Added benefit to consultation with the instructor is that you can get feedback early in the process, so that you will know how much and what kind of work you have to do to earn a good grade. Providing the professor with an early draft of the outline well in advance is a great way to receive a feedback, for example.

What’s Required: Summary/Outline: you need to give me a one page summary (2.2 cm margin, 12 pt font, double-spaced), at least two weeks before your presentation. This can be an early draft. This will help me determine your progress, and allows me to give you a feedback with enough time for you to make any
changes. I'll distribute copies of your summary to the class, so you need to give me a final version at least two days before the presentation. A list of references: you need to give me a list of references that you are using, at least two weeks in advance. You also need to give me the final list at least two days before presentation. The materials that you use should be from the primary or secondary scientific literature. Do not use newspapers, magazines, encyclopedias, textbooks, or websites as primary references.

Presentation: The presentation should be about ~45 minutes each. Try not to read a prepared paper. Go slowly and emphasize your main points. Do not try to give too much information, but try to summarize the information. Please use PowerPoint presentation; Let me know at least 2 weeks in advance so I can have the appropriate program available if you use another presentation program.
Course Objectives

To develop a working knowledge of the cellular, molecular, and neuro-physiological principles fundamental to neuroscience research and relate these principles to the normal and diseased nervous system. The course will consist of four modules. Module A will provide knowledge of neurophysiology: the ionic basis of electrical excitability of neurons, action potentials, synaptic transmission, and basic biophysics of neurons. Module B will cover the cellular and molecular aspects of the nervous system. Module C will cover more advanced topics such as neurotransmitter systems and the fundamental mechanisms of neuronal and glial communication. Module D will convey a foundational understanding of how the nervous system develops.

Course Assistance

Although there are no office hours, students are encouraged to contact the lecturers with their questions regarding the material and can make appointments to meet with the lecturers or course directors regarding any concerns. Contact information for all lectures is provided below.

A recent American College Health Survey found stress, sleep problems, anxiety, depression, interpersonal concerns, death of a significant other, and alcohol use among the top ten health impediments to academic performance. Students experiencing personal problems or situational crises during the quarter are encouraged to contact the OSU Counseling and Consultation Service (614-292-5766; www.ccs.osu.edu) for assistance, support and advocacy. This service is free and confidential.
A textbook is not required; Relevant chapters found in any basic Cell Biology, Neuroscience, or Development textbook would be an excellent supplement. For neurophysiology, and basic neuroscience text book such as those authored by Kandel, Bear, Haines, Mathews, Nicholls, Purves, or Zigmond would contain chapters with relevant information. For cell and molecular biology, text books authored by Squire, (Fundamental Neuroscience) or Cell/Molecular Biology texts by Alberts or Roberts. For neurodevelopment, "Development of the nervous system" (Sanes, Rah, and Harris-available at the Health Sciences Library). Our web site is: http://carmen.osu.edu/.

**Student Evaluation**

Four Exams (25% each) taken in the classroom. There are no opportunities for extra credit from other assignments.

**Schedule Autumn 2017**

<table>
<thead>
<tr>
<th>#</th>
<th>Date</th>
<th>Topic</th>
<th>Instructor</th>
<th>Module/Leader</th>
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<tbody>
<tr>
<td>1</td>
<td>Wed 8/23/2017</td>
<td>Course Overview/Membrane Potential and Ion Channels</td>
<td>C. Askwith/ C. Beattie <a href="mailto:askwith.1@osu.edu">askwith.1@osu.edu</a></td>
<td>C. Askwith</td>
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<tr>
<td>2</td>
<td>Fri 8/25/2017</td>
<td>Ionic currents and Ohms Law</td>
<td>C. Askwith</td>
<td>C. Askwith</td>
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<tr>
<td>3</td>
<td>Mon 8/28/2017</td>
<td>Ionic Basis of the Action Potential</td>
<td>G. Bishop <a href="mailto:bishop.9@osu.edu">bishop.9@osu.edu</a></td>
<td>C. Askwith</td>
</tr>
<tr>
<td>4</td>
<td>Wed 8/30/2017</td>
<td>Basic Electrophysiology Techniques</td>
<td>G. Bishop/C. Askwith</td>
<td>C. Askwith</td>
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<td>5</td>
<td>Fri 9/01/2017</td>
<td>Propagation/Modulation of Action Potentials</td>
<td>G. Bishop</td>
<td>C. Askwith</td>
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<td>Mon 9/04/2017</td>
<td><strong>NO CLASS</strong></td>
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<td>Labor Day</td>
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<td>6</td>
<td>Wed 9/06/2017</td>
<td>Synaptic Potentials</td>
<td>C. Askwith</td>
<td>C. Askwith</td>
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<td>7</td>
<td>Fri 9/08/2017</td>
<td>Synaptic Integration</td>
<td>C. Askwith</td>
<td>C. Askwith</td>
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<td>Mon 9/11/2017</td>
<td>Synaptic Plasticity: LTP/LTD</td>
<td>C. Askwith</td>
<td>C. Askwith</td>
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<td>Wed 9/13/2017</td>
<td>Advanced Methods in Neurophysiology</td>
<td>C. Askwith</td>
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<td><strong>EXAM 1</strong></td>
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<tr>
<td>10</td>
<td>Mon 9/18/2017</td>
<td>The Nucleus and Chromatin Structure</td>
<td>J. Oberdick <a href="mailto:oberdick.1@osu.edu">oberdick.1@osu.edu</a></td>
<td>J. Oberdick</td>
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<td>Transcription Factors and Transcriptional Networks in Neuroscience</td>
<td>J. Oberdick</td>
<td>J. Oberdick</td>
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<td>12</td>
<td>Fri 9/22/2017</td>
<td>Protein Synthesis and Translational Control</td>
<td>C. G. Lin <a href="mailto:lin.492@osu.edu">lin.492@osu.edu</a></td>
<td>J. Oberdick</td>
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<tr>
<td>13</td>
<td>Mon 9/25/2017</td>
<td>Protein Sorting and Trafficking</td>
<td>C. G. Lin</td>
<td>J. Oberdick</td>
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<tr>
<td>14</td>
<td>Wed 9/27/2017</td>
<td>Axonal transport and the cytoskeleton of nerve cells I</td>
<td>A. Brown <a href="mailto:brown.2302@osu.edu">brown.2302@osu.edu</a></td>
<td>J. Oberdick</td>
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<tr>
<td>15</td>
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<td>Axonal transport and the cytoskeleton of nerve cells II</td>
<td>A. Brown</td>
<td>J. Oberdick</td>
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<td>16</td>
<td>Mon 10/02/2017</td>
<td>Signaling Pathways I</td>
<td>Chen Gu <a href="mailto:gu.49@osu.edu">gu.49@osu.edu</a></td>
<td>J. Oberdick</td>
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<tr>
<td>17</td>
<td>Wed 10/04/2017</td>
<td>Signaling Pathways II</td>
<td>K. Obrietan <a href="mailto:obrietan.1@osu.edu">obrietan.1@osu.edu</a></td>
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<td>18</td>
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<td>The Mitochondria</td>
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<td>High-Throughput DNA Sequencing and In Silico Applications</td>
<td>J. Oberdick</td>
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<td>Wed 10/11/2017</td>
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<td>20</td>
<td>Mon 10/16/2017</td>
<td>Cell Biology of the Synapse</td>
<td>J. Jontes <a href="mailto:Jontes.1@osu.edu">Jontes.1@osu.edu</a></td>
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<td>Electrical Synapses</td>
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<td>M. Zhou</td>
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<td>Excitatory and Inhibitory Amino acids</td>
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<td>M. Zhou</td>
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<td>Catecholamines: Dopamine, Epinephrine</td>
<td>H. Gu <a href="mailto:gu.37@osu.edu">gu.37@osu.edu</a></td>
<td>M. Zhou</td>
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<td>Acetylcholine, Serotonin, Histamine</td>
<td>R. T. Boyd <a href="mailto:boyd.16@osu.edu">boyd.16@osu.edu</a></td>
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<td>25</td>
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<td>Neuropeptides, ATP, and Other Neurotransmitters</td>
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<td>Glia and Myelination</td>
<td>D. McTigue <a href="mailto:dana.mctigue@osumc.edu">dana.mctigue@osumc.edu</a></td>
<td>M. Zhou</td>
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<tr>
<td>27</td>
<td>Wed 11/01/2017</td>
<td>Astrocyte Physiology</td>
<td>M. Zhou <a href="mailto:min.zhou@osumc.edu">min.zhou@osumc.edu</a></td>
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<td>28</td>
<td>Fri 11/03/2017</td>
<td>Cell Survival and Death</td>
<td>S. Yoon <a href="mailto:yoon.84@osu.edu">yoon.84@osu.edu</a></td>
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<td>Module/Leader</td>
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<td>Sensory Transmission</td>
<td>S. Mangle</td>
<td>M. Zhou</td>
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<td><a href="mailto:Stuart.Mangel@osumc.edu">Stuart.Mangel@osumc.edu</a></td>
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<td>Veterans Day</td>
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<td>30</td>
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<td>Overview of Nervous System Development and Neural induction</td>
<td>C. Beattie</td>
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<td><a href="mailto:beattie.24@osu.edu">beattie.24@osu.edu</a></td>
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<td>Polarity and Regionalization</td>
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<td>Neuro and Gliogenesis</td>
<td>A. Fischer</td>
<td>C. Beattie</td>
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<td></td>
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<td><a href="mailto:fischer.412@osu.edu">fischer.412@osu.edu</a></td>
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<td>Thanksgiving</td>
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<td>34</td>
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<td>Mechanisms of Axon Guidance</td>
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<td>Target Selection and Topographic Maps</td>
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<td>Synapse Formation and Elimination</td>
<td>C. Beattie</td>
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<td>37</td>
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<td>C. Beattie</td>
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<td>38</td>
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<td>Methods in Neuroscience</td>
<td>C. Beattie/ Oberdick</td>
<td>C. Beattie</td>
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Finals Week December 09th-15th (Fri-Thurs)  EXAM 4 To Be Determined
NeuroSc/Dent 7002: FOUNDATIONS OF NEUROSCIENCE II  
(6 CR HOURS)  
SPRING SEMESTER 2018  
JANUARY 8 – APRIL 23, 2018

FACULTY

<table>
<thead>
<tr>
<th>Facult Name</th>
<th>Office</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Georgia Bishop</td>
<td>3187 Graves Hall</td>
<td>2-8363</td>
<td><a href="mailto:bishop.9@osu.edu">bishop.9@osu.edu</a></td>
</tr>
<tr>
<td>Dr. Susan Travers</td>
<td>4153 Postle Hall</td>
<td>2-7619</td>
<td><a href="mailto:travers.3@osu.edu">travers.3@osu.edu</a></td>
</tr>
<tr>
<td>Dr. Derick Lindquist</td>
<td>049 Psychology Building</td>
<td>2-2236</td>
<td><a href="mailto:lindquist.40@osu.edu">lindquist.40@osu.edu</a></td>
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CLASSROOM:  1024 GRAVES HALL -SOUTHWEST (9TH AVENUE) SIDE OF GRAVES HALL ON THE FIRST FLOOR.

LECTURE FORMAT:  Lectures will be given M, W, and Th from 8:30-10:00 AM.  These are intended to provide an overview of the structure and function of the nervous system as well as general concepts of the organization of a region/system.  They are not intended to be all inclusive.  Students will be expected to read the textbook for supplemental information.

SUGGESTED TEXTBOOKS:
Note The Human Brain, 6th Edition: An Introduction to Its Functional Anatomy

Please note you do not have to purchase all of these books.  However, material from lectures may come from any of them.  Some are available in the library or in individual labs.  You may choose from any of several Neuroanatomy textbooks to supplement the lectures.

EXAM FORMAT:  Individual instructors will prepare questions from their lectures.  Each exam will be worth 50 points. The number of questions will be proportional to the amount of time the instructor lectured. The written portion will consist of short answer, multiple choice, and fill in the blank questions.  The exams are not cumulative.  Each will cover material presented since the last exam.

Final Grade:  Your final grade will be based on the total number of points you accumulate out of the 200 available from 4 exams.

ACADEMIC INTEGRITY (ACADEMIC MISCONDUCT)
Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities.  Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's Code of Student Conduct, and that all students will complete all academic and scholarly assignments with fairness and honesty.  Students must recognize that failure to follow the rules and guidelines established in the University's Code of Student Conduct and this syllabus may constitute "Academic Misconduct."  The Ohio State University's Code of Student Conduct (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the university, or subvert the educational process."  Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination.  Ignorance of the University's Code of Student Conduct is never considered an "excuse" for academic misconduct, so I recommend that you review the Code of Student Conduct and, specifically, the sections dealing with academic misconduct.  If I suspect that a student has committed academic misconduct in this course, I am obligated by University Rules to report my suspicions to the Committee on Academic Misconduct.  If COAM determines that you have violated the University's Code of Student Conduct (i.e., committed academic misconduct), the sanctions for the misconduct could include suspension or dismissal from the University and a failing grade in this course.  If you have any questions about the above policy, please contact me.  Other sources of information on academic misconduct (integrity) include: COAM's web page (<http://oaa.osu.edu/coam/home.html>) "Eight Cardinal Rules of Academic Integrity" (<http://www.northwestern.edu/uacc/8cards.html>).
ACCOMODATIONS: Everything possible will be done to make every reasonable program or facility adjustment to assure success for each student. A recent American College Health Survey found stress, sleep problems, anxiety, depression, interpersonal concerns, death of a significant other, and alcohol use among the top ten health impediments to academic performance. Students experiencing personal problems or situational crises during the quarter are encouraged to contact the OSU Counseling and Consultation Service (614-292-5766; www.ccs.osu.edu) for assistance, support and advocacy. This service is free and confidential.
<table>
<thead>
<tr>
<th>DATE</th>
<th>TOPIC</th>
<th>LECTURER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8</td>
<td>Introduction to Course, Terminology &amp; Overview of Nervous System</td>
<td>Bishop</td>
</tr>
<tr>
<td>1/10</td>
<td>Arterial and Venous supply to CNS; Ventricles and flow of CSF</td>
<td>Bishop</td>
</tr>
<tr>
<td>1/11</td>
<td>Peripheral Nervous System; Functional Components of Nerves Autonomic Nervous System</td>
<td>Bishop</td>
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<tr>
<td>1/15</td>
<td>No Class MLK holiday</td>
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<tr>
<td>1/17</td>
<td>Cranial nerves – components and peripheral distribution</td>
<td>Bishop</td>
</tr>
<tr>
<td>1/18</td>
<td>Anatomical and Functional Organization of the Spinal Cord</td>
<td>Bishop</td>
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<tr>
<td>1/22</td>
<td>Brainstem I</td>
<td>Travers</td>
</tr>
<tr>
<td>1/24</td>
<td>Brainstem II</td>
<td>Travers</td>
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<tr>
<td>1/25</td>
<td>Anatomical Organization of Diencephalon (Thalamus) and Telencephalon</td>
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<tr>
<td>1/29</td>
<td>EXAM 1 Covers material from 1/8 through 1/25</td>
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<tr>
<td>1/31</td>
<td>Principles of Sensory Processing and Coding</td>
<td>Travers</td>
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<tr>
<td>2/1</td>
<td>Somatosensory System: Transduction Mechanisms of Touch</td>
<td>Travers</td>
</tr>
<tr>
<td>2/5</td>
<td>Pain</td>
<td>Travers</td>
</tr>
<tr>
<td>2/7</td>
<td>Chemical Senses: Taste</td>
<td>Travers</td>
</tr>
<tr>
<td>2/8</td>
<td>Chemical Senses: Olfaction</td>
<td>Travers</td>
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<tr>
<td>2/12</td>
<td>Peripheral Muscle Receptors and spinal cord reflexes</td>
<td>Bishop</td>
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<tr>
<td>2/14</td>
<td>Descending pathways that control motor neurons</td>
<td>Bishop</td>
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<td>2/15</td>
<td>Vestibular System</td>
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<td>2/19</td>
<td>EXAM 2 Covers material from 1/31 through 2/15</td>
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<tr>
<td>2/21</td>
<td>Cerebellar Control of Movement</td>
<td>Bishop</td>
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<tr>
<td>2/22</td>
<td>Basal Ganglia Control of Movement</td>
<td>Bishop</td>
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<tr>
<td>2/26</td>
<td>Reticular Formation – General Overview and Chemically Defined Pathways</td>
<td>Bishop</td>
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<tr>
<td>2/28</td>
<td>Hypothalamus – General Organization</td>
<td>Obrietan</td>
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<tr>
<td>3/1</td>
<td>Circadian Rhythms</td>
<td>Obrietan</td>
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<tr>
<td>Date</td>
<td>Topic</td>
<td>Instructor</td>
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<tr>
<td>3/5</td>
<td>Cerebral Cortex: Functional Organization of Association Areas</td>
<td>Givens</td>
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<tr>
<td>3/7</td>
<td>Limbic System: Overview and Aggression</td>
<td>Weil</td>
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<tr>
<td>3/8</td>
<td>Hippocampus: Current concepts on function (Memory, Epilepsy)</td>
<td>Weil</td>
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<tr>
<td>3/12-</td>
<td><strong>SPRING BREAK NO CLASS</strong></td>
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<tr>
<td>3/16</td>
<td><strong>EXAM 3 Covers Material from 2/21 through 3/22</strong></td>
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</tr>
<tr>
<td>3/19</td>
<td>Neurobiology of Learning and Memory</td>
<td>Lindquist</td>
</tr>
<tr>
<td>3/21</td>
<td>Neurobiology of Learning and Memory</td>
<td>Lindquist</td>
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<tr>
<td>3/22</td>
<td>Stem Cells</td>
<td>Kirby</td>
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<tr>
<td>3/26</td>
<td><strong>EXAM 3 Covers Material from 2/21 through 3/22</strong></td>
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<tr>
<td>3/28</td>
<td>Neuroendocrine Function</td>
<td>Leuner</td>
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<tr>
<td>3/29</td>
<td>Psychiatric Disorders: Schizophrenia (Delayed start – 5-10 minutes)</td>
<td>Coutellier</td>
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<tr>
<td>4/2</td>
<td>Sexual Dimorphism</td>
<td>Lenz</td>
</tr>
<tr>
<td>4/4</td>
<td>Sleep Circuits</td>
<td>Weil</td>
</tr>
<tr>
<td>4/5</td>
<td>Stress – Overview of Neural Systems</td>
<td>DeVries</td>
</tr>
<tr>
<td>4/9</td>
<td>Stress – Autonomic control</td>
<td>DeVries</td>
</tr>
<tr>
<td>4/11</td>
<td>Interactions between Nervous System and Immune System</td>
<td>Godbout</td>
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<tr>
<td>4/12</td>
<td>The Aging Nervous System</td>
<td>Kokiko-Cochran</td>
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<td>4/16</td>
<td>Drugs of Abuse</td>
<td>Gu</td>
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<tr>
<td>4/18</td>
<td>fMRI studies in Behavior</td>
<td>Leber</td>
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<tr>
<td>4/19</td>
<td><strong>Study Day</strong></td>
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<tr>
<td>4/23</td>
<td><strong>EXAM 4 Covers material from 3/28 through 4/18</strong></td>
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</table>
SYLLABUS

Neurosc 7050 / Biophrm 7050  
Neurobiology of Disease, 3 credit hours

Class schedule:  
Class meets 2 times/week (Tuesday and Thursday, 1-3 pm) in Graves Hall room 1187

Course Director:  
Dr. Chien-liang Glenn Lin (Neurosc 7050)  
Dr. Andrej Rotter (Biophrm 7050)  
Phone: 688-5433  
Phone: 292-7747  
Office: 4123 Graves Hall  
Office: 5142 Graves Hall  
E-mail: lin.492@osu.edu  
E-mail: rotter.1@osu.edu

Course description:  
Neurobiology of Disease will explore the basis of major disease affecting the nervous system. Experts from throughout the university will provide state of the art overviews on the clinical, neuropathological, physiological and molecular features of diseases. Lecturers will also discuss key areas that hold promise for future research, including the development of rational therapies. Diseases to be discussed will include: neurodegenerative diseases, neurodevelopmental disorders, neurotrauma, brain tumors, epilepsy, and multiple sclerosis. There will be a paper discussion following the lectures for each subject. Furthermore, students will be required to write a research proposal and the proposals will be discussed on the final week of this course.

Grading:  
The grade will be based on a research proposal, participation in paper discussion, quiz, and class attendance.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Total points</th>
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<tbody>
<tr>
<td>A</td>
<td>90-100</td>
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<tr>
<td>B</td>
<td>80-89</td>
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<tr>
<td>C</td>
<td>70-79</td>
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<tr>
<td>D</td>
<td>60-69</td>
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<tr>
<td>E</td>
<td>&lt;60</td>
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</tbody>
</table>

Research Proposal 30 points  
Paper discussion 30 points  
Quiz 30 points  
Class attendance 10 points

Office hours: by appointment

Schedule:
Week 1  
Jan 9  
1-2 pm - Clinical and neuropathological features of Alzheimer’s disease (AD) by Dr. Douglas Scharre

Jan 11  
1-3 pm - Molecular mechanisms and current therapeutic developments of AD by Dr. Jeff Kuret
Week 2
Jan 16 1-2 pm - Paper discussion (AD)
Jan 18 1-2 pm - Clinical and neuropathological features of Multiple Sclerosis (MS) by Dr. Jaime Imitola
2-3 pm - Molecular mechanisms and current therapeutic developments of MS by Dr. Amy Lovett-Racke

Week 3
Jan 23 1-2 pm - Paper discussion (MS)
Jan 25 1-2 pm - Molecular mechanisms and current therapeutic developments of PD

Week 4
Jan 30 1-2 pm - Clinical and neuropathological features of Amyotrophic Lateral Sclerosis (ALS) by Dr. Stephen Kolb
2-3 pm - Molecular mechanisms and current therapeutic developments of ALS by Dr. Stephen Kolb
Feb 1 1-2 pm - Clinical and neuropathological features of PD by Dr. Dr. Sandra Kostyk
2-3 pm - Paper discussion (PD)

Week 5
Feb 6 1-2 pm - Clinical and neuropathological features of Spinal Muscular Atrophy (SMA) by Dr. John Kissel
2-3 pm - Molecular mechanisms and current therapeutic developments of SMA by Dr. Arthur Burghes
Feb 8 1-2 pm - Paper discussion (ALS)

Week 6
Feb 13 1-2 pm - Paper discussion (SMA)
Feb 15 1-2 pm - Clinical and neuropathological features of Autism by Dr. Jacqueline Wynn
2-3 pm - Molecular mechanisms and current therapeutic developments of Autism by Dr. John Oberdick

Week 7
Feb 20 1-2 pm - Molecular mechanisms and current therapeutic developments of TBI by Dr. Jonathan Godbout
Feb 22 1-2 pm - Clinical and neuropathological features of Traumatic Brain Injury (TBI) by Dr. Daniel Eiferman
2-3 pm - Paper discussion (Autism)

Week 8
Feb 27 1-2 pm - Clinical and neuropathological features of Stroke by Dr. Diana Greene-Chandos
2-3 pm - Molecular mechanisms and current therapeutic developments of Stroke
March 1 1-2 pm - Paper discussion (TBI)

Week 9
March 6 1-2 pm - Paper discussion (Stroke)
March 8 1-2 pm - Clinical and neuropathological features of Spinal Cord Injury (SCI) by Dr. Sandra Kostyk
2-3 pm - Molecular mechanisms and current therapeutic developments of SCI by Dr. Dana McTigue

Week 10
Spring break, no classes

Week 11
March 20 1-2 pm - Clinical features and treatments of postpartum disorders by Dr. Tamar Gur
2-3 pm - Molecular mechanisms and current therapeutic developments of postpartum disorders by Dr. Tamar Gur

March 22 1-2 pm - Paper discussion (SCI)

Week 12
March 27 1-2 pm - Paper discussion (mood disorders)
March 29 1-2 pm - Clinical and neuropathological features of Brain Tumors by Dr. Brad Elder
2-3 pm - Molecular mechanisms and current therapeutic developments of Brain Tumors by Dr. Monica Venere

Week 13
April 3 1-2 pm - Paper discussion (Brain Tumors)
April 5 1-2 pm - Clinical features and treatment of chronic pain by Dr. Kiran Rajneesh
2-3 pm - Molecular mechanisms and current therapeutic developments of neuropathic pain

Week 14
April 10 1-2 pm - Paper discussion (Pain)
April 12 1-3 pm - Proposal discussion

Week 15
April 17 1-3 pm - Proposal discussion
April 19 1-3 pm - Proposal discussion

***Research proposal due on March 29***
BHGEN 5602 – Behavioral Genetics
SPRING 2018

Dr. Laurence Coutellier
Dept. of Psychology
Office: Room 53, Psychology Building
Phone: 614-688-2270
Email: coutellier.8@osu.edu

Pre-requisite: PSYCH 100/PSYCH3313; Highly recommended: 4500 (Molecular genetics)
Lecture Time/Room: Tu-Thurs 2:20-3:40pm; 140 W 19th room #207.
Office hours: Th 10:00-11:00

Course description and objectives: Behavioral genetics is the field of study that examines the role of genetics in animal (including human) behavior. Often associated with the "nature versus nurture" debate, behavioral genetics is highly interdisciplinary, involving contributions from biology, genetics, epigenetics, ethology, psychology, and statistics. The goal is to provide knowledge concerning the interrelationship of genetics and behavior, and its implications for health and human development and education. The objectives of this class are:

- To introduce students with basic Mendelian genetics and how genes regulate behaviors
- To introduce students with the concepts of epigenetics and gene-environment interactions
- To examine the methods used to understand both nonhuman and human behavior.
- To understand the genetic contribution to many psychopathologies and neurodevelopmental disorders

In addition, students will learn to read the primary scientific literature on Behavior Genetics and will develop the ability to critically read and review scientific articles. The course will be intellectually demanding, and will require a substantial amount of reading and active in-class discussion. The course readings will require about 3 hours per week outside class. Apart from the textbook, they will include some recent journal papers and book chapters.


Websites: The course website can be found at www.carmen.osu.edu. This site is where all course materials and information are made available. The class will also use PubMed to find relevant scientific published articles (http://www.ncbi.nlm.nih.gov/pubmed).

Assistance: I am available to talk about the course, the course material, and strategies to improve your learning. I can answer questions by e-mail or phone, but I will gladly set up an appointment at a time that is mutually acceptable for more lengthy discussions.

Attendance: Consistent attendance is required and will count for 5% of the final grade.
5 % points = 1 excused absence
4 % points = 2 excused or 1 unexcused absence
3 % points = 3 excused or 2 unexcused absences
1 % points = 4 excused or 3 unexcused absences
0 % points = 5 or more excused or 4 or more unexcused absences

**Exams:** There will be 3 exams in this course: 2 mid-terms with multiple choice questions (20% of the total grade each) and 1 final exam composed of multiple choice and short-answer questions (35% of the total grade). **No make-up exams will be given, except in the case of documented illness or emergency.** Prior approval must be received from instructor. In the event of a last-minute emergency, you must email or call the instructor on the same day as the exam, preferably before the exam begins. **Acceptable excuses for missing an exam are a death in the family, personal illness or the illness of your child or spouse, and unforeseen accidents.** This rule will be strictly followed. Please obtain documented proof of these events should they occur. If you are late for an exam, you will be allowed to take it but you will have to submit your answers by the closing time like everybody else.

**Paper presentation and discussion:** Students will present in groups of 3 to 4 a PowerPoint discussion on a behavioral genetics research article. Each presentation should last 30 min, with an additional 10 min set aside for class discussion. The articles have been selected by me. Groups formation and papers selection will take place on the first day of class. In class presentation will be worth **10% of the final grade** toward their final grade.

Each PDF article is posted to Carmen and every student is expected to read and be ready to discuss it prior to class. Students not presented will have to prepare discussion questions that will be turned in before each paper presentation. These discussion questions will be graded and a final score worth of **10% of the final grade** will be computed.

**Grade Evaluation:** The final grade is based on the percentage of total points. Attendance will be worth 5%, the 2 mid-terms exams will be worth 20% each, the final exam 35% and the in-class presentation and discussion 20%, for a total of 100%. Mid-term exams and the final will be curved according to the overall performance of the class. After the final exam **NO EXTRA CREDIT WILL BE GIVEN FOR ANY REASON.**

The following grading scheme will be used (OSU Standard Scheme):

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Score %</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>93 and above</td>
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<tr>
<td>A-</td>
<td>90-92.5</td>
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<td>B+</td>
<td>87-89.5</td>
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<tr>
<td>B</td>
<td>83-86.5</td>
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<tr>
<td>B-</td>
<td>80-82.5</td>
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<tr>
<td>C+</td>
<td>77-79.5</td>
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<tr>
<td>C</td>
<td>73-76.5</td>
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<tr>
<td>C-</td>
<td>70-72.5</td>
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<td>D+</td>
<td>67-69.5</td>
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<td>D</td>
<td>60-66.5</td>
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<tr>
<td>E</td>
<td>59.5 and below</td>
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</table>
Academic Ethics: All students enrolled in OSU courses are bound by the Code of Student Conduct (http://studentaffairs.osu.edu/resource_csc.asp). The instructor and course assistants are committed to maintaining a fair assessment of student performance in this course. Suspected violations of the Code will be dealt with according to the procedures detailed in the Code. Specifically, any alleged cases of misconduct will be referred to the Committee on Academic Misconduct. It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct. For a good, concise description of academic misconduct and a list of frequently asked questions, see: http://oaa.osu.edu/coamfaqs.html.

Sexual misconduct/relationship violence: "Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at http://titleix.osu.edu or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu".

Accommodations for Students with Special Needs: The policy of The Ohio State University is to provide every reasonable, appropriate, and necessary accommodation to qualified disabled students. The University's colleges and academic centers evaluate and judge applications on an individual basis and no categories of disabled individuals are automatically barred from admission. The privacy rights of each disabled person are honored to the fullest extent possible. The University's interest in a student's disabilities are only for the purpose of accommodating his/her specific disability, thereby providing an academically qualified disabled student access to programs and activities accorded all other qualified students. Whenever generally accessible facilities do not adequately accommodate a specific disability, the University makes every reasonable accommodation and program or facility adjustment to assure individual access. These policies are fully supported and practiced in this class. Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 098 Baker Hall, 113 W. 12th Avenue; telephone 292-3307, TDD 292-0901, VRS 429-1334; http://www.ods.ohio-state.edu/.

Schedule: This schedule is preliminary and subject to change. Chapters may be added or dropped, which in turn will affect the material covered in each Exam.
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<thead>
<tr>
<th>Date</th>
<th>Title</th>
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<tr>
<td>1/9/2018 T</td>
<td>Intro + Genetic refresher (1)</td>
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<tr>
<td>1/11/2018 Th</td>
<td>Genetic refresher (2)</td>
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<tr>
<td>1/16/2018 T</td>
<td>Animal models in Behavioral Genetics</td>
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<tr>
<td>1/18/2018 Th</td>
<td>Student presentations</td>
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<tr>
<td>1/25/2018 T</td>
<td>Genes x environment interactions</td>
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<tr>
<td>1/30/2018 T</td>
<td>Epigenetics</td>
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<td>2/1/2018 Th</td>
<td>Student presentations</td>
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<tr>
<td>2/6/2018 T</td>
<td>Review session</td>
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<tr>
<td>2/8/2018 Th</td>
<td>Midterm 1</td>
</tr>
<tr>
<td>2/13/2018 T</td>
<td>Genetics of cognitive abilities/disabilities</td>
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<tr>
<td>2/15/2018 Th</td>
<td>Student presentations</td>
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<tr>
<td>2/20/2018 T</td>
<td>Schizophrenia and Mood disorders (P1)</td>
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<tr>
<td>2/22/2018 Th</td>
<td>Schizophrenia and Mood disorders (P2)</td>
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<td>2/27/2018 T</td>
<td>Student presentations</td>
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<tr>
<td>3/1/2018 Th</td>
<td>Genetic and environmental influences of brain develoment</td>
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<tr>
<td>3/6/2018 T</td>
<td>Genetic and environmental influences of brain develoment</td>
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<tr>
<td>3/8/2018 Th</td>
<td>Student presentations</td>
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<tr>
<td>3/13/2018 T</td>
<td>Spring Break</td>
</tr>
<tr>
<td>3/15/2018 Th</td>
<td>Spring Break</td>
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<tr>
<td>3/20/2018 T</td>
<td>Review session</td>
</tr>
<tr>
<td>3/22/2018 Th</td>
<td>Midterm 2</td>
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<tr>
<td>3/27/2018 T</td>
<td>Personality and personality disorders</td>
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<td>4/3/2018 T</td>
<td>Substance use disorders</td>
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<td>4/5/2018 Th</td>
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<tr>
<td>4/10/2018 T</td>
<td>The genetic of obesity and aging</td>
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<td>4/17/2018 T</td>
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<tr>
<td>4/19/2018 Th</td>
<td>Conclusive remarks / Review session</td>
</tr>
<tr>
<td>4/25/2018 2:00-3:45pm</td>
<td>Final exam</td>
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Course: Psychology 5898: Seminar in Behavioral Neuroscience
Semester: Spring 2018
Time: Tuesday/Thursday 9:35-10:55AM
Place: Ramseyer Hall 009
Instructor: Dr. Kathryn Lenz
Assistant Professor, Departments of Psychology & Neuroscience
Office: Psychology Building, Room 45
Phone: 614-292-8565
Email: lenz.56@osu.edu

Course description: This course is designed to provide upper-level psychology and neuroscience students with an overview of contemporary research topics in the broad interdisciplinary field of Behavioral Neuroscience, encompassing behavioral, cognitive, developmental, and systems neuroscience. The course includes research-based lectures by various faculty from several Departments and Colleges who are each distinguished investigators in their particular research field. Each faculty member will describe the current state of understanding in a particular area of Behavioral Neuroscience as well as critical issues yet to be resolved. The remainder of the course meetings will be student presentations of current research papers centered on ‘hot topics’ in behavioral neuroscience. Thus a major goal of the course is to increase students’ exposure to current research, practice reading and comprehending primary literature, and gain experience presenting research findings orally.

Text and other resources: There is no textbook for this class. Students will read primary research articles in behavioral neuroscience research. For faculty guest lecture days, 2-3 articles relevant to the lecture will be chosen by the lecturer. These articles should be read prior to the lecture, and the content of these articles is fair game on exams. For student presentation days, the class will be responsible for reading the research articles being presented prior to class, and students must be ready to make insightful comments and critiques of the research as well as posing questions in class to generate lively discussion (See participation). Articles will be posted on Canvas prior to each day’s class.

Office Hours: Office hours will be held each Tuesday/Thursday from 12-1 PM, and by appointment. I am here to help with anything you need and I encourage you to regularly attend office hours. I’m more than happy to meet with you outside of office hours if you schedule it in advance via email, but please no unscheduled drop-ins outside of regular office hours. If you are struggling with the course materials or would like to work toward a higher grade in the class, please meet with me as early as possible in the semester. Please use office hours as an opportunity to regularly review the material, your exam results, and ask any questions you have. I also encourage each student to meet with me before their research article presentation to ensure it is a good choice of article and that they understand all technical details in the article.

Exams. There will be three midterm exams in this course, which will consist of long answer essays in response to prompts from each faculty guest speaker based on their lectures and assigned readings as well as questions related to the articles in student presentations. All midterms will be taken during regular class times throughout the semester as noted in the daily schedule below. These exams will include the material
covered since the last exam, generally 3-4 faculty lectures. **Each exam will be worth 20 points (Exam 1-2: 20 points; Total: 60 points).**

**Presentation:** Each student will present a PowerPoint discussion on a behavioral neuroscience research article. Each presentation should last approximately 30 min, with an additional 10 min set aside for class discussion. That means that 1-2 students will present per class period. The article will be selected in consultation with myself, and I encourage you to choose your article and meet with me well in advance of your presentation (the sooner the better!). The order of presentations will be decided on the first week of class via Doodle Poll (see Canvas for link). Each PDF article will be posted to Canvas prior to the presentation and students should read and be ready to discuss it prior to class. Each student’s presentation will be worth **25 points** toward their final grade.

**Student Attendance and Participation:** Attendance and participation are critical in this course, and attendance will be taken at the beginning of each class. If you expect to be absent, you must obtain permission from the instructor prior to the start of class. OSU’s policy defines acceptable excuses as: a death in the family, personal illness or the illness of your child or spouse, and unforeseen accidents. Please obtain documented proof of these events should they occur. If no notification is received the absence will be counted as unexcused.

**Attendance:** Attendance will account for **5 points** of your final grade and will be computed as follows. **For excused absences,** you must perform makeup work for the day of class missed, in the form of a 1 page summary of the readings assigned for that day’s class, either student presentation papers or faculty-assigned papers. Otherwise your absence will be treated as unexcused.

- 5 points = 1 excused absence or less
- 4 points = 2 excused or 1 unexcused absence
- 3 points = 3 excused or 2 unexcused absences
- 1 point = 4 excused or 3 unexcused absences
- 0 points = 5 or more excused or 4 or more unexcused absences

**Participation:** All students are expected to actively participate in class, both in faculty lectures and student presentation discussions. The entire course revolves around student’s ability to read and think on various topics, which means everyone must contribute. Examples of class participation include asking questions during student or faculty presentations, or responding to discussion questions during student presentations. In addition, to ensure that students are reading articles prior to class and thinking critically about them, we will utilize a Canvas discussion board to regularly log student responses to the readings. Each day of student presentations will be accompanied by a discussion thread, where each student is expected to log their initial responses, questions, ideas etc. about each article. These will not be graded for what you have to say, but merely that you have something to say about each article. The procedure for these will be demonstrated on the first day of class. If you do not attend class regularly, your participation grade will suffer in addition to your attendance grade above. **A combination of in class discussion and discussion board usage will comprise your participation grade.** Class participation will account for **15 points** of your final grade, so take it seriously!
Grading: Grades will be based on points earned out of a possible 100 points. This will include your scores from three midterm exams, presentation, and attendance and participation. No curve or ‘rounding up’ will be applied to grades at the end of the semester, and no extra credit will be offered.

Points breakdown:

<table>
<thead>
<tr>
<th>Category</th>
<th>Maximum Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams</td>
<td>60 (20 per midterm x 3)</td>
</tr>
<tr>
<td>Presentation</td>
<td>20</td>
</tr>
<tr>
<td>Attendance</td>
<td>5</td>
</tr>
<tr>
<td>Participation</td>
<td>15</td>
</tr>
</tbody>
</table>

Final score will be 100 points maximum. The standard OSU grading scale will be used to assign final grades:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93-100%</td>
<td>93</td>
</tr>
<tr>
<td>A-</td>
<td>90-92%</td>
<td>90-92</td>
</tr>
<tr>
<td>B+</td>
<td>87-89%</td>
<td>87-89</td>
</tr>
<tr>
<td>B</td>
<td>83-86%</td>
<td>83-86</td>
</tr>
<tr>
<td>B-</td>
<td>80-82%</td>
<td>80-82</td>
</tr>
<tr>
<td>C+</td>
<td>77-79%</td>
<td>77-79</td>
</tr>
<tr>
<td>C</td>
<td>73-76%</td>
<td>73-76</td>
</tr>
<tr>
<td>C-</td>
<td>70-72%</td>
<td>70-72</td>
</tr>
<tr>
<td>D+</td>
<td>67-69%</td>
<td>67-69</td>
</tr>
<tr>
<td>D</td>
<td>60-66%</td>
<td>60-66</td>
</tr>
<tr>
<td>E</td>
<td>0-59%</td>
<td>0-59</td>
</tr>
</tbody>
</table>

Make-up Policy: Students are expected to take their exams at the times specified on the syllabus. Students will be requested to provide verifiable documentation of the absence (a doctor’s note, an obituary, or letter from university athletics department). If the absence is valid (i.e., a university approved reason with sufficient documentation) then a make-up exam will be scheduled within one week of the scheduled exam with no grade penalty. If the absence is NOT considered valid (i.e., unapproved reason or insufficient documentation) then a make-up exam will be denied.

Academic Misconduct: It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct at http://studentconduct.osu.edu.

Disabilities Statement: The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability
Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. **SLDS contact information:** slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

**Sexual misconduct/relationship violence:** Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at [http://titleix.osu.edu](http://titleix.osu.edu) or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu.

### Daily Schedule for Psych 5898:

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic Covered in Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tues 1/9</td>
<td>Class overview, presentation sign-up. Lecture: Finding &amp; Presenting a Research Article</td>
</tr>
<tr>
<td></td>
<td>Thurs 1/11</td>
<td>Faculty lecture: Dr. Liz Kirby</td>
</tr>
<tr>
<td>2</td>
<td>Tues 1/16</td>
<td>Student presentations</td>
</tr>
<tr>
<td></td>
<td>Thurs 1/18</td>
<td>Student presentations</td>
</tr>
<tr>
<td>3</td>
<td>Tues 1/23</td>
<td>Student presentations</td>
</tr>
<tr>
<td></td>
<td>Thurs 1/25</td>
<td>Student presentations</td>
</tr>
<tr>
<td>4</td>
<td>Tues 1/30</td>
<td>Student presentations</td>
</tr>
<tr>
<td></td>
<td>Thurs 2/1</td>
<td>Faculty Lecture: Dr. Derick Lindquist</td>
</tr>
<tr>
<td>5</td>
<td>Tues 2/6</td>
<td>Student presentations</td>
</tr>
<tr>
<td></td>
<td>Thurs 2/8</td>
<td>Student presentations</td>
</tr>
<tr>
<td>6</td>
<td>Tues 2/13</td>
<td>Faculty Lecture: Dr. Jonathan Godbout</td>
</tr>
<tr>
<td></td>
<td>Thurs 2/15</td>
<td>Exam 1 in class</td>
</tr>
<tr>
<td>7</td>
<td>Tues 2/20</td>
<td>Student presentations</td>
</tr>
<tr>
<td></td>
<td>Thurs 2/22</td>
<td>Student presentations</td>
</tr>
<tr>
<td>8</td>
<td>Tues 2/27</td>
<td>Faculty Lecture: Dr. Leah Pyter</td>
</tr>
<tr>
<td></td>
<td>Thurs 3/1</td>
<td>Faculty Lecture: Dr. Benedetta Leuner</td>
</tr>
<tr>
<td>9</td>
<td>Tues 3/6</td>
<td>Faculty Lecture: Dr. Laurence Coutellier</td>
</tr>
<tr>
<td></td>
<td>Thurs 3/8</td>
<td>Student presentations</td>
</tr>
<tr>
<td>----</td>
<td>3/13 + 3/15</td>
<td><strong>SPRING BREAK: NO CLASS</strong></td>
</tr>
<tr>
<td>10</td>
<td>Tues 3/20</td>
<td>Student presentations</td>
</tr>
<tr>
<td></td>
<td>Thurs 3/22</td>
<td>Exam 2 in class</td>
</tr>
<tr>
<td>11</td>
<td>Tues 3/27</td>
<td>Student presentations</td>
</tr>
<tr>
<td></td>
<td>Thurs 3/29</td>
<td>Faculty lecture: Dr. Katy Lenz OR student presentations</td>
</tr>
<tr>
<td>12</td>
<td>Tues 4/3</td>
<td>Student presentations</td>
</tr>
<tr>
<td></td>
<td>Thurs 4/5</td>
<td>Student presentations</td>
</tr>
<tr>
<td>13</td>
<td>Tues 4/10</td>
<td>Faculty Lecture: Dr. Tamar Gur</td>
</tr>
<tr>
<td></td>
<td>Thurs 4/12</td>
<td>Student presentations</td>
</tr>
<tr>
<td>14</td>
<td>Tues 4/17</td>
<td>Faculty Lecture: Dr. Dana McTigue</td>
</tr>
<tr>
<td></td>
<td>Thurs 4/19</td>
<td>Student presentations</td>
</tr>
<tr>
<td>15</td>
<td>Mon 4/30</td>
<td>Exam 3 during Final Exam time: 8:00am-9:45am in regular classroom</td>
</tr>
</tbody>
</table>
PSYCH 6810
Statistical Methods in Psychology I
Fall 2017

Lecture : MW 9:35 to 10:55 in PS 35
Lab : Th 9:35 to 10:55 / 11:10 to 12:30 in PS 22
Instructor : Dr. Andrew F. Hayes (hayes.338, Lazenby Hall LZ230)
Teaching Assistants : Jack DiTrapani (ditrapani.4, LZ240d)
Saemi Park (park.2339, LZ240d)
Office hours : By appointment, preferably; by happenstance, frequently.

Course catalog description
Basic concepts of descriptive and inferential statistics; includes estimation, hypothesis testing, non-parametric techniques, and analysis of variance.

Instructor’s description
This course provides a broad overview of the fundamentals of statistical description and inference and their implementation in computer software. Topics include data description and visualization, the theory and practice of estimation and hypothesis testing, and special and simple cases of the general linear model used to compare groups as typically applied in psychology and other social sciences. This course is the first of two required statistical methods courses in the Ph.D. program in Psychology, is a prerequisite to PSYCH 6811 (Statistics in Psychology II: Linear regression analysis), and functions as the foundation course for further advanced study in applied statistical methods at the graduate level in psychology and other disciplines. This course will cover material you may have covered in related courses as an undergraduate, but it will do so at a graduate level and a higher level of abstraction and a focus on theory, but without unnecessary higher-level mathematics.

Course Administration

Required Course Materials
  *I recommend purchasing the soft cover version and saving a lot of money. Also on reserve at Thompson Library. The ISBN for the soft cover version is 9781138982932*
- IBM Statistics (“SPSS”), SAS and R.
- A USB memory stick
- Additional supplementary and optional readings will be posted as PDF files on CARMEN as needed.

Supplementary/Optional Course Materials

Additional texts (on reserve in Thompson Library)
Additional material on the web:
- http://www.ats.ucla.edu/stat/
Books on SPSS (available electronically through the OSU Libraries)

Books on SAS (available for free through the OSU Libraries)

Books on R (available for free through the OSU Libraries)

Lecture and Lab Components
This course has a lecture and a lab component. The lectures will be held in PS35 on Monday and Wednesday mornings and focus on concepts, theory, and some practical computational matters. The lab component of the course is held on Thursday in the morning in PS22 in the department’s computing lab. This component of the course will focus on hands-on training using statistical software, though some new concepts and ideas will be presented in the lab as well. The lab component is the primary place where you will get your hands dirty learning how to write statistical code under the guidance of the TAs. It is also a good place to have discussions about concepts with a smaller group and the TAs, who will sometimes have opinions that are different than the instructor’s on matters of controversy or practice. The course TAs, who are also graduate students, have knowledge and advice pertinent to the course and graduate school in general that will benefit you in one way or another. Use them as a resource. Due to space constraints, you must attend the lab in which you are registered.

Computer Software
In this class you will get exposure to and practice with statistical programming and data management using IBM Statistics (aka “SPSS”), SAS, and R. All three of these programs are installed in the computer lab in PS22. You are encouraged to download and install each of these programs on your personal laptop or other computer so you will have access to them outside of the lab. SPSS and SAS are freely available to students through an OSU site license. See https://ocio.osu.edu/software for instructions on how to download and license. R can be downloaded at no charge from http://www.r-project.org. SPSS is available for both Windows and Mac OS, whereas SAS is available only for Windows through OSU. Note that Windows 10 users require the Windows 10 business class operating system.

There is no required text or reading pertinent to the use of SPSS, SAS, and R. You will find three “Using...” documents on CARMEN pertinent to the use of SPSS, SAS, and R. This will most likely be updated periodically as the semester progresses. You are encouraged to seek out various books and web resources for additional information about these programs. Some suggestions can be found in the “supplementary materials” section above.

Evaluation
You will be evaluated exclusively based on your performance on various assignments and exams. Each assignment or exam is converted from points earned to a 0 to 100 scale, and weighted as described below when the final course grade is derived. The grading system in this class is largely a percentage-based system, where
Midterm Exam (20%): There will be a two-part midterm examination on October 18th and 19th that requires you to demonstrate that you are comfortable with the methods and concepts outlined in the course thus far. The midterm will be open notes and open book, but should not be approached casually because of this. This exam will be given only once. With the exception of an extreme, documented, and unforeseen circumstance, no makeup exam will be provided if you miss it. It will not be given early or late to accommodate course or personal conflicts you have built into your schedule. Students with disabilities needing additional time or a distraction free workspace to complete the exam should register with Student Life Disabilities Services (SLDS) at least two weeks in advance of the exam to have the exam proctored by officials at SLDS.

Final Exam (20%): You will be given a take home final exam on the last day of class that is due no later than 10AM on December 11th. A dataset will be distributed to you and your job will be to read the data, do any needed data manipulation, conduct several analyses, and interpret and describe the results. You may turn in the exam early if desired.

Lab Participation (10%): Each week you will meet with a graduate teaching assistant in Psychology 22. You are expected to attend each meeting and participate in various activities. Everyone starts with 100% of participation points. Points are docked for failing to attend, not turning in various exercises you will be asked to complete now and then, and so forth.

Take-home assignments (50%): At various points during the semester you will receive an assignment to complete. There will be five or six such assignments roughly corresponding to each unit, but the topics covered in various assignments may straddle units. The due dates can be found in the schedule of topics at the end of this syllabus. These due dates are tentative. Assignments are due at the beginning of class on the due date. In no circumstance will an assignment be due earlier than the date listed, but the due date may be pushed back if the course gets behind schedule or it is otherwise warranted. Unless you are told otherwise, you may work as a team with one or two other students enrolled in this class when working through graded assignments. In this case, you will turn in one response to the assignment with each person’s name on it, and you will each receive the grade allocated to your response. It is a violation of the Code of Student Conduct to collaborate on the assignments with anyone who is not a part of your team (other than the course instructor or the course TAs) prior to the time and date the assignment is due. Such collaboration includes exchanging answers, electronically or otherwise, or other forms of casual or formal conversation related to the content of the assignment. Violators of this rule will be sent to the Committee on Academic Misconduct in accordance with university policy.

In some cases, answers will be right or wrong, but in other cases there is room for subjective grading based on presentation, thoroughness, and so forth. Writing quality will matter when your assignments are graded. Be specific, precise, attentive to detail, and careful in how you phrase your answers, as you will be graded based on your actual answer, not what you intended to say or said awkwardly. Submit something you will be proud to submit, not something to just get you by until the next deadline. Do not wait until the last minute to start the assignments, as procrastination will show in the quality of your work. Use Word or a comparable word processing program to complete assignments. Use the symbol font for Greek symbols when needed, and learn to use Microsoft’s Equation editor or some other system for generating clean, crisp mathematical expressions (such as LaTeX, if you are already familiar with it or up to the challenge of learning it). Be careful in your formatting of mathematical equations, and be aware of order of operations rules (see assignment #0 for a review). Submit something presented neatly and that you will be proud to claim is a product of your thinking.
You are expected to turn in a hard copy of your assignment with all sheets stapled together, as well as upload an electronic copy to a CARMEN drop box labeled for that assignment. An assignment is determined to be late if the hard copy is not delivered by the date and time the assignment is due.

The answers for each question will provided soon after the assignment is due. It is up to you to check your responses with the official answer sheet. If you do not understand any inconsistencies between the official answers and your own, you may contact me for assistance. Frequently, we will discuss the assignments in class or lab after the due date has passed and everyone has turned in their assignment.

Policies and Other Miscellaneous Matters

Late or Absent Assignments and Missed Exams
Unless otherwise notified, assignments are due by the beginning of class on the date due. Points are lost for each hour an assignment is late, and an assignment will not be accepted more than 24 hours after the due date. The only exceptions to these rules are tragic, extraordinary, and totally unforeseen personal circumstances that are convincingly documented no later than 24 hours after the due date. Exams are given only once. As noted above, no make-up exams are given except in extraordinary, unforeseen, and documented circumstances.

Attendance
There is no formal attendance policy for this course. However, you are expected to attend regularly. If I believe attendance is slipping, I reserve the right to create an attendance policy. Not attending class regularly is a very bad idea, as some of the examined material will be presented only during lecture or labs, and many of the SPSS, SAS, and R techniques to be discussed in lab are not always easily found in the documentation or other readings. As a general rule, subjective decisions about grading on assignments are less likely to go in your favor if you appear not be putting in the effort to learn by regularly attending class. Due to space constraints, you must attend the lab in which you are registered.

Academic Misconduct
All students at Ohio State University are bound by the Code of Student Conduct (see http://studentconduct.osu.edu/). Violations of the Code in this class, especially pertaining to 3335-23-04 Section A on Academic Misconduct, will be aggressively prosecuted through the procedures the university has set up to deal with violations of the Code. If any of the teaching staff believes you have violated the Student Code, your case will be referred to the Committee on Academic Misconduct (see http://oaa.osu.edu/coam.html). Not following the rules of the course as outlined in this syllabus or provided orally is considered a violation of the Code of Student Conduct. Penalties for academic misconduct from a graduate student are especially stiff and are almost certain to include failure in this course and suspension from the university, even for a first offense. Graduate students in Psychology found in violation of the Code are, needless to say, rarely perceived to be in good standing and can expect revocation of funding and, potentially, expulsion from the graduate program. Repeat offenses and especially egregious violations of the Code can result in expulsion from the University, regardless of program, even on the first offense. Make sure that you are familiar with the Code of Student Conduct, and familiarize yourself with “Ten Suggestions for Preserving Academic Integrity” available online at http://oaa.osu.edu/coamtensuggestions.html. I expect students who believe a classmate has violated this policy to come forth to me so the alleged violation can be investigated and appropriate action can be taken if needed. If possible, your identity will be protected. You can be found in violation of the Code of Student Conduct for assisting others violate the Code. “Cheating” in any form in graduate school will not be tolerated, and the consequences for doing so are severe.
Having said all this, we understand that there is value to study groups and assisting others acquire understanding of the material in this class. We encourage such study groups and we will do what we can to help these groups flourish. Except as discussed in the “Take Home Assignments” section above, those conversations should steer clear of questions that are part of graded assignments.

It is considered a violation of the Code of Student conduct to provide, receive, or use materials from this course from a prior year, whether taught by the current instructor or someone else, when completing assignments or studying for exams. In addition, distribution of PDFs or other electronic versions of textbooks or other commercial materials to others who have not purchased or not otherwise licensed to have such materials, as well as possession of such materials so received, is not only illegal but also a violation of the university’s Code of Student Conduct and is grounds for suspension or dismissal from the university.

Tentative Nature of this Syllabus
This syllabus represents a contract in the works. Events that transpire over the term may require me to modify the administration of this course and therefore the syllabus. In the event I need to modify the syllabus, I will announce the modification in class and on CARMEN and/or through email. Ultimately, it is the student’s responsibility to keep up with any such modifications and be aware of current policies and deadlines.

Mathematics Anxiety
Often one of the student’s greatest barriers to mastering material in statistics courses is fear of mathematics. Many students lock up with anxiety when they are asked to do any computation and this anxiety typically interferes with the ultimate goal of conceptual understanding. I hope you will not let this happen to you. In this class most of the computations will be done by computer, although during lecture some basic computations cannot be avoided. You will be shown formulas and expect to understand them. But you need not understand the mathematics of the formula so much as you need to understand how they are conceptually used. To be sure, you need to be comfortable with basic mathematical operations. This is graduate school, and you have chosen to study the scientific discipline of psychology or a related social science. You will have to think analytically and quantitatively throughout your days as a graduate student at this university. If this is something you do not feel up to, you probably don’t belong here. You will be challenged in this course, but there is no reason why everyone can’t do well. The best thing that you can do to enhance your likelihood of success is discarding all the baggage that you may be bringing with you into the course—fear, anxiety, a belief that you are no good with numbers, or that you are destined to fail.

With these words of encouragement, at the same time remember that this is a graduate-level course. I admonish Master’s students with less experience dealing with the intensity and pace of graduate school, and even Ph.D. students with a Master’s degree from another university, not to approach this course as if it were an undergraduate course. You will not succeed if you don’t dedicate time and energy to reading and contemplating the material. You will probably find yourself working harder during your first year of graduate school than you have ever worked before.

PSYCH 6810 online
This course is represented on CARMEN. I will upload data files, PowerPoint slides, PDFs of extra readings, and other course-relevant material to CARMEN. Learn to use CARMEN, as it is used throughout this university in almost every class you will take.
Roles of the Teaching Assistants
The graduate teaching assistants (TA) are responsible for the lab component of the course, grading, and helping you master the topics. Although the TAs will do their best to respond to your concerns and questions in a timely fashion, keep in mind that they are also students at OSU and have their own demands and schedules that may not always mesh with yours. So please be patient if they are not available to respond to your needs immediately.

Students with Disabilities
The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I should register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. For accommodations needed related to an exam, seek the section of the syllabus above on examinations. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

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Schedule of Lecture Topics
The course is divided up into six units, with the time dedicated to each unit being flexible and determined in part by the pace of discussion and questions asked during lectures. We will use the assignment due dates as a rough guide to scheduling. You will be told when we are transitioning into the next unit. I recommend you read each chapter several times as we work through the unit, for your understanding will grow by this repetition, and after concepts that may have confused you at first are clarified during lecture. You probably won’t do as well in this course as you could if you don’t read the book. You are advised to set aside time each day to read what you have not, and reread what you have.

UNIT 1: Basic Concepts, Sampling and Measurement, Data Description

This unit covers variables, samples, statistics and parameters, sampling and basic measures of central tendency and variation, as well as some graphical and tabular displays of data.

Reading: Chapters 1, 2, 3, and 4
Assignment #1 tentative due date: September 13

UNIT 2: Fundamentals of Probability and the Normal Distribution

In this unit we cover simple laws of probability, conditioning, properties of the normal distribution, and probability and related computations primarily for normally-distributed variables.
UNIT 3: Fundamentals of Estimation Theory, Sampling Distributions, Point and Interval Estimates

This unit focuses on the sampling behavior of an estimator, the central limit theorem, the t distribution, using estimation theory to make educated guesses about parameters (as point and interval estimates), and the relationship between sample size and precision of estimation.

UNIT 4: Hypothesis Testing: Concepts and Theory

This unit outlines the concepts and theory of hypothesis testing, including null and alternative hypotheses, decision errors, power, and the application of theory to simple inferential tasks such as testing a hypothesis about a single parameter.

UNIT 5: Hypothesis Testing in Practice I: Comparing Two Groups

This unit extends the theory and practice of hypothesis testing to comparisons between two means (independent groups and two dependent or matched means) as well as proportions in the form of tests of independence in a crosstabulation.

UNIT 6: Hypothesis Testing in Practice II: More than Two Groups

This final unit further extends the theory and practice of hypothesis testing to problems involving more than two groups or means.

FINAL EXAM DUE: Monday December 11, 10:00 AM
PSYCH 6811  
Statistical Methods in Psychology II  
Spring 2018

Lecture : MW 9:35 to 10:55 in PS 35  
Lab : Th 9:35 to 10:55 / 11:10 to 12:30 in PS 22  
Instructor : Dr. Andrew F. Hayes (hayes.338, Lazenby Hall LZ230)  
Teaching Assistants : Jack DiTrapani (ditrapani.4, LZ240d)  
Saemi Park (park.2339, LZ240d)  
Office hours : By appointment, preferably; by happenstance, frequently.

Course Description

Course catalog  
Simple linear regression and correlation, multiple linear regression, interactions; introduction to other related methods such as nonlinear regression and random effects models.

Instructor’s description  
This course covers an introduction to the analysis of data using the general linear model. Topics include simple and multiple linear regression, partial association, multicategorical categorical predictors, moderation, the interpretation of model parameters, and other topics in linear models as time allows. Focus is on conceptual understanding rather than mathematical computation. Students will gain experience practicing their learning through various assignments using statistical software. This course is the second of two required statistical methods courses in the Ph.D. program in psychology and functions as the foundation course for further advanced study in applied statistical methods at the graduate level in psychology and other disciplines. Because you should already be familiar with basic principles of statistics and inference from the prerequisite course, this course will be delivered at a quicker pace than PSYCH 6810.

Course Administration

Course Materials

- IBM Statistics (“SPSS”), SAS, and R.
- A USB memory stick

Supplementary Reading

- The occasional PDF available on CARMEN.

Lecture and Lab Components

This course has a lecture and a lab component. The lectures will be held in PS35 on Monday and Wednesday mornings and focus on concepts, theory, and some practical computational matters. The lab component of the course is held on Thursday in the morning in PS22 in the department’s computing lab. This component of the course will focus on hands-on training using statistical software, though some new concepts and ideas will be
presented in the lab as well. The lab component is the primary place where you will get your hands dirty learning how to write statistical code in SPSS and R under the guidance of the TAs. It is also a good place to have discussions about concepts with a smaller group and the TAs, who will sometimes have opinions that are different than the instructor’s on matters of controversy or practice. The course TAs, who are also graduate students, have knowledge and advice pertinent to the course and graduate school in general that will benefit you in one way or another. Use them as a resource. **Due to space constraints, you should attend the lab in which you are registered, at least until enrollment and everyone’s schedules settle down.**

**Computer Software**

In this class you will get exposure to and practice with statistical programming and data management using IBM Statistics, SAS, and R. Both of these programs are installed in the computer lab in PS22. You are encouraged to download and install each of these programs on your personal laptop or other computer so you will have access to them outside of the lab. SPSS and SAS is freely available to students through an OSU site license. For download and licensing instructions, see https://ocio.osu.edu/software. R can be downloaded at no charge from http://www.r-project.org.

There is no required text or reading pertinent to the use of these programs. You are encouraged to seek out various books and web resources for additional information about these programs. On CARMEN you will find “Using SPSS,” “Using SAS,” and “Using R” documents that will be periodically updated during the semester. You will find these helpful.

For additional guidance, consider consulting one of many resources on the use of computer software for data analysis. Some suggestions are below, many of which are available electronically through the OSU libraries.

**Additional material on the web:**
- http://www.ats.ucla.edu/stat/

**Books on SPSS (available electronically through the OSU Libraries)**

**Books on SAS (available for free through the OSU Libraries)**

**Books on R (available for free through the OSU Libraries)**

**Evaluation**

You will be evaluated exclusively based on your performance on various assignments and exams. Each assignment or exam is converted from points earned to a 0 to 100 scale, and weighted as described below when the final course grade is derived. The grading system in this class is largely a percentage-based system, where

- 93+ = A;
- 89-92 = A-
- 85-88 = B+
- 78-84 = B
- 74-77 = B-
- 70-73 = C+
- 65-69 = C
- 60-64 = C-
- 55-59 = D+
- 50-54 = D
- <50 = E
Midterm Exam (20%): There will be a midterm examination on March 8th that requires you to demonstrate that you are comfortable with the methods and concepts outlined in the course thus far. The midterm will be open notes and open book, but should not be approached casually because of this. This exam will be given only once. With the exception of an extreme, documented, and unforeseen circumstance, no makeup exam will be provided if you miss it. It will not be given early or late to accommodate course or personal conflicts you have built into your schedule.

Final Exam (20%): You will be given a take home final exam on the last day of class that is due between 10AM and noon on April 27, which is the date and time the registrar has scheduled the final exam for this course. A dataset will be distributed to you and your job will be to read the data, do any needed data manipulation, conduct several analyses, and interpret and describe the results. You may turn in the exam early if desired.

Lab Participation (20%): Each week you will meet with a graduate teaching assistant in Psychology 22. You are expected to attend each meeting and participate in various activities. Everyone starts with 100% of participation points. Points are docked for failing to attend, not turning in various exercises you will be asked to complete now and then, and so forth.

Take-home assignments (40%): At five various points during the semester you will receive an assignment to complete. They will be distributed at least one week prior to the due date. The tentative due dates are

- Assignment #1: January 31st
- Assignment #2: February 21st
- Assignment #3: March 5th
- Assignment #4: April 2nd
- Assignment #5: April 18th

Assignments are due at the beginning of class on the due date. Due dates may be adjusted depending on the pacing of the material in class. In no circumstance will an assignment be due earlier than the date listed, but the due date may be pushed back if the course gets behind schedule or it is otherwise warranted. Unless you are told otherwise, you may work as a team with one or two other students enrolled in this class when working through graded assignments. In this case, you will turn in one response to the assignment with each person’s name on it, and you will each receive the grade allocated to your response. It is a violation of the Code of Student Conduct to collaborate on the assignments with anyone who is not a part of your team (other than the course instructor or the course TAs) prior to the time and date the assignment is due. Such collaboration includes exchanging answers, electronically or otherwise, or other forms of casual or formal conversation related to the content of the assignment. Violators of this rule will be sent to the Committee on Academic Misconduct in accordance with university policy.

In some cases, answers will be right or wrong, but in other cases there is room for subjective grading based on presentation, thoroughness, and so forth. Writing quality will matter when your assignments are graded. Be specific, precise, attentive to detail, and careful in how you phrase your answers, as you will be graded based on your actual answer, not what you intended to say or said awkwardly. Submit something you will be proud to submit, not something to just get you by until the next deadline. Do not wait until the last minute to start the assignments, as procrastination will show in the quality of your work. Use Word or a comparable word processing program to complete assignments. Use the symbol font for Greek symbols when needed, and learn to use Microsoft’s Equation editor or some other system for generating clean, crisp mathematical expressions. Be careful in your formatting of mathematical equations, and be aware of order of operations rules. Submit something presented neatly and that you will be proud to claim is a product of your thinking.
You are expected to turn in a hard copy of your assignment with all sheets stapled together, as well as upload an electronic copy to CARMEN. An assignment is determined to be late if the hard copy is not delivered by the date and time the assignment is due.

The answers for each question will provided soon after the assignment is due. It is up to you to check your responses with the official answer sheet. If you do not understand any inconsistencies between the official answers and your own, you may contact me for assistance. Frequently, we will discuss the assignments in class or lab after the due date has passed and everyone has turned in their assignment.

Policies and Miscellaneous Matters

Late or Absent Assignments and Missed Exams

Unless otherwise notified, assignments are due by the beginning of class on the date due. An assignment will not be accepted more than 24 hours after the due date. The only exceptions to these rules are tragic, extraordinary, and totally unforeseen personal circumstances that are convincingly documented no later than 24 hours after the due date. Exams are given only once. As noted above, no make-up exams are given except in extraordinary, unforeseen, and documented circumstances.

Attendance

There is no formal attendance policy for this course. However, you are expected to attend regularly. If I believe attendance is slipping, I reserve the right to create an attendance policy. Not attending class regularly is a very bad idea, as some of the examined material will be presented only during lecture or labs, and many of the SPSS, SAS, and/or R techniques discussed in lab are not always easily found in the documentation or other readings. As a general rule, subjective decisions about grading on assignments are less likely to go in your favor if you appear not be putting in the effort to learn by regularly attending class. Attendance may be taken in lectures and lab on randomly chosen days.

Academic Misconduct

All students at Ohio State University are bound by the Code of Student Conduct (see http://studentaffairs.osu.edu/resource_csc.asp). Violations of the Code in this class, especially pertaining to 3335-23-04 Section A on Academic Misconduct, will be aggressively prosecuted through the procedures the university has set up to deal with violations of the Code. If any of the teaching staff believes you have violated the Student Code, your case will be referred to the Committee on Academic Misconduct (see http://oaa.osu.edu/coam.html). Not following the rules of the course as outlined in this syllabus or provided orally is considered a violation of the Code of Student Conduct. Penalties for academic misconduct from a graduate student are especially stiff and are almost certain to include failure in this course and suspension from the university, even for a first offense. Graduate students in Psychology found in violation of the Code are, needless to say, rarely perceived to be in good standing and can expect revocation of funding and, potentially, expulsion from the graduate program. Repeat offenses and especially egregious violations of the Code can result in expulsion from the University, regardless of program, even on the first offense. Make sure that you are familiar with the Code of Student Conduct, and familiarize yourself with “Ten Suggestions for Preserving Academic Integrity” available online at http://oaa.osu.edu/coamtensuggestions.html. I expect students who believe a classmate has violated this policy to come forth to me so the alleged violation can be investigated and appropriate action can be taken if needed. If possible, your identity will be protected. You can be found in violation of the Code of Student Conduct for assisting others violate the Code. “Cheating” in any form in graduate school will not be tolerated, and the consequences for doing so are very severe.
Having said all this, we understand that there is value to study groups and assisting others acquire understanding of the material in this class. We encourage such study groups and we will do what we can to help these groups flourish.

**Tentative Nature of this Syllabus**

This syllabus represents a contract in the works. Events that transpire over the term may require me to modify the administration of this course and therefore the syllabus. In the event I need to modify the syllabus, I will announce the modification in class and on CARMEN and/or through email. Ultimately, it is the student’s responsibility to keep up with any such modifications and be aware of current policies and deadlines.

**Mathematics Anxiety**

Often one of the student’s greatest barriers to mastering material in statistics courses is fear of mathematics. Many students lock up with anxiety when they are asked to do any computation and this anxiety typically interferes with the ultimate goal of conceptual understanding. I hope you will not let this happen to you. In this class most of the computations will be done by computer, although during lecture some basic computations cannot be avoided. You will be shown formulas and expect to understand them. But you need not understand the mathematics of the formula so much as you need to understand how they are conceptually used. To be sure, you need to be comfortable with basic mathematical operations. This is graduate school, and you have chosen to study the scientific discipline of psychology or a related social science. You will have to think analytically and quantitatively throughout your days as a graduate student at this university. If this is something you do not feel up to, you probably don’t belong here. You will be challenged in this course, but there is no reason why everyone can’t do well. The best thing that you can do to enhance your likelihood of success is discarding all the baggage that you may be bringing with you into the course—fear, anxiety, a belief that you are no good with numbers, or that you are destined to fail.

With these words of encouragement, at the same time remember that this is a graduate-level course. I admonish Master’s students with less experience dealing with the intensity and pace of graduate school, and even Ph.D. students with a Master’s degree from another university, not to approach this course as if it were an undergraduate course. You will not succeed if you don’t dedicate time and energy to reading and contemplating the material. You will probably find yourself working harder during your first year of graduate school than you have ever worked before.

**PSYCH 6811 online**

This course is represented on CARMEN. I will upload data files, PowerPoint slides, PDFs of extra readings, and other course-relevant material to CARMEN. Learn to use CARMEN, as it is used throughout this university in almost every class you will take.

**Roles of the Teaching Assistant (TA)**

The graduate teaching assistants are responsible for the lab component of the course, grading, and helping you master the topics. Although the TAs will do their best to respond to your concerns and questions in a timely fashion, keep in mind that they are also students at OSU and have their own demands and schedules that may not always mesh with yours. So please be patient if they are not available to respond to your needs immediately.
Students with Disabilities

The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I should register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. For accommodations needed related to an exam, seek the section of the syllabus above on examinations. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Sexual Misconduct/Relationship Violence

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at http://titleix.osu.edu or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu

Schedule of Lecture Topics

The course is divided up into six units, with the time dedicated to each unit being flexible and determined in part by the pace of discussion and questions asked during lectures. We will use the assignment due dates as a rough guide to scheduling. You will be told when we are transitioning into the next unit.

I recommend you read the readings for each unit several times as we work through the unit, for your understanding will grow by this repetition, and after concepts that may have confused you at first are clarified during lecture. You are advised to set aside time each day to read what you have not, and reread what you have.

If you took PSYCH 6810, you should still have a copy of Hayes (2005). Use this as optional supplementary reading. Chapters 12 and 13 roughly overlap with Units 1, 2, and 3. Chapters 14-15 roughly overlap with Unit 4, and Chapter 16 roughly overlaps with Unit 5.

UNIT 1: Regression analysis fundamentals

This unit introduces the fundamentals of linear regression analysis using the simple regression model. Topics include the least squares criterion, residuals, estimation and interpretation of model parameters, the correlation versus the regression coefficient.

Reading: Darlington and Hayes (2017) Chapters 1 and 2

UNIT 2: Multivariate association and partial association

This unit addresses the use of the linear regression model for generating estimates of one variable from a set of predictor variables. Topics covered include the multiple correlation, partial regression coefficients, partial and semipartial association.

Reading: Darlington and Hayes (2017) Chapters 3, Chapter 6 for your interest (optional)
UNIT 3: Statistical inference

This unit addresses statistical inference, including inference about multiple correlation as well as for individual variables in a model. Also included are such topics as collinearity, bias, and power.

Reading: Darlington and Hayes (2017) Chapter 4

UNIT 4: Extending the fundamentals

This unit further develops your understanding of the fundamentals of linear regression analysis, including dichotomous regressors, sets of regressors and setwise partial association, regression to the mean, variable selection methods, “effect size”

Reading: Darlington and Hayes (2017) Chapters 5 and 7, 8

UNIT 5: Multicategorical regressors

This unit illustrates the correspondence between linear regression analysis and analysis of variance and covariance. Various coding systems for representing multicategorical variables are described as well as the interpretation of regression coefficients when using different coding strategies. Omnibus inference about a model is compared to analysis of variance. Also addressed is the comparison of groups when adjusting for other variables, adjusted means, and the equivalence between linear regression analysis and analysis of covariance. We also discuss the multiple test problem.

Reading: Darlington and Hayes (2017) Chapters 9, 10, and 11

UNIT 6: Nonlinearity and interaction

In this unit, the constraints that one variable’s effect on another in a regression model is linear, or that it is independent of other variables in the model, are relaxed. With a simple extension of the model, we address how to model curves, as well as how to set up a model that allows one variable’s effect to depend linearly on another variable in the model. Interpretation of model coefficients, the influence of variable scaling, and probing and visualizing interactions is addressed.

Reading: Darlington and Hayes (2017) Chapters 12, 13, and 14

UNIT 7: Regression diagnostics and assumptions and other miscellaneous topics

This unit covers various miscellaneous topics as time allows. Some possible topics include the hunt for influential or “irregular cases,” and a discussion of the statistical assumptions underlying the use and interpretation of linear regression analysis.

Reading: Darlington and Hayes (2017) Chapter 16, and perhaps other material to be announced

Final exam due no later than April 27, 10:00 – noon.
Psychology 6820

Introduction to Bayesian Statistics for Psychological Data

Lecture: MW 9:35-10:55, PS22

Instructor: Trisha Van Zandt
Lazenby 240H, 614-688-4081
Office hours: W 11:00-12:00, or by appointment
E-mail: van-zandt.2@osu.edu

T.A.: Bob Gore
Lazenby 221P
Office hours: F 9:30-11:00
E-mail: gore.95@osu.edu

Web site: This course will use Carmen. Electronic communications via Carmen use your OSU handle (e.g., “smith.9999@osu.edu”). Make sure you check your OSU email on a regular basis.


Software: 1. R (free download for all platforms) with the “Bolstad” library (see Appendix D, p. 387).
2. The ‘rstan’ package (free download, use the ‘install.packages()’ command in R.
3. Other useful packages to install include ‘mcmc’ and ‘MCMCpack.’
4. You might eventually want to check out JASP, an open-source alternative to SPSS that incorporates some Bayesian procedures. We won’t use it in this class, though.

Students with Disabilities

This syllabus is available in alternative formats upon request. In addition, if you may need an accommodation based on the impact of a disability, you should contact me immediately. Students with special needs should contact the Office of Disability Services (ODS) at 292-3307, TDD 292-0901, for certification if they have not already done so. Upon such certification, the ODS and I will make every effort to accommodate special needs. However, to ensure that evaluation of student performance in the course is conducted in a manner that is fair to all students, special accommodations will not be granted in the absence of ODS certification.
Sexual Misconduct and/or Relationship Violence

The Ohio State University is bound by Title IX, a federal law enacted in 1972. Title IX prohibits sex discrimination and recognizes that such discrimination includes sexual misconduct: harassment, domestic and dating violence, sexual assault, and stalking. Under this law, sexual misconduct is a civil rights offense, and perpetrators will be held accountable under the law in the same way as others who commit civil rights abuses against people who are protected because of their race, religion, national origin, sexual orientation, disability status, etc. Victims of sexual misconduct and/or violence are entitled to the same kinds of accommodations and support services as victims of other kinds of civil rights abuses.

As an instructor, one of my responsibilities is to help create a safe learning environment on our campus. As a professor of the Ohio State University, I also have a mandatory reporting responsibility. This means that I am required to share information regarding sexual misconduct or other crimes that may have occurred either on or off of the OSU campus with the University’s Office of Human Resources. If you or someone you know has been sexually harassed or assaulted, you may receive confidential counseling from the Office of Student Life’s Counseling and Consultation Service at 614-292-5766. You may also contact the Sexual Assault Response Network of Central Ohio (SARNCO) at 614-267-7020 (24/7 helpline). Other resources, confidential and non-confidential, may be found at the University’s Title IX Coordinator’s office or by contacting the Ohio State Title IX Coordinator at titleix@osu.edu.

Academic Misconduct

All students at the Ohio State University are bound by the Code of Student Conduct (see http://studentaffairs.osu.edu/resource_csc.asp) and are responsible for familiarizing themselves with the Code. In particular, Rule 3335-23-04 (Prohibited conduct), Section A, defines academic misconduct. Suspected violations of the code in this class will be dealt with according to the procedures detailed in that code. Any alleged cases of misconduct will be referred to the Committee on Academic Misconduct.

Specifically, the use of unauthorized materials during exams, the use of unauthorized assistance on a graded assignment, unauthorized collaboration such as working together on homeworks or sharing files, falsification of documents, serving as or enlisting the assistance of a substitute for an exam or graded assignment, or violation of course rules as contained in this syllabus, in addition to the other prohibited conducts described in Rule 3335-23-04 Section A, constitute academic misconduct.

If you have a question about whether or not an activity is or could be perceived to be academic misconduct, for this or any other class, please ask me.

All graded assignments in this course should be completed by you alone and not by or in collaboration with anyone else.

Is it misconduct?

1. If you have used your mouse to highlight text from a document/web site/etc. that you did not write, and moved/copied that text into a document of your own, it is academic misconduct. Take notes (without cutting and pasting) on the highlighted text in a separate document, then write the ideas in your own words in the document you intend to present as your own.

2. If you email files to another classmate, copy your files onto your classmate’s thumb drive, or similarly receive files from another classmate, it is academic misconduct. Studying together, discussing material together, asking each other about specific problems and how to solve them is encouraged. Under no circumstances should these encouraged activities result in shared files. Guard your work! Do not share your computers or drives without making sure your work is secure.
3. Think about your assignments to be turned in using the same logic as papers to be submitted for publications. If your assignment should really acknowledge a co-author or two, you have committed academic misconduct.

Course Description and Objectives

Over the past several decades, modern statistical analysis has moved steadily away from the traditional frequentist approach taught in introductory-level statistics courses and toward Bayesian analysis. The reasons for this are manifold, and include the wide availability of powerful desktop computers and software that makes Bayesian statistics possible for everyone. The driving force behind this shift, however, is the fact that Bayesian techniques are more desirable than frequentist null hypothesis tests for at least four reasons.

First, the idea that our prior expectations about the outcome of an experiment can play a role in our analyses embodies the cumulative nature of the scientific enterprise. Why must we pretend that a population mean is equal to something that we know it isn’t, or that there is no difference between two groups when all previous studies have shown that there is? Bayesian statistics acknowledges that we do not perform analyses in complete ignorance of the state of the world.

Second, the treatment of parameters as uncertain or subject to randomness is more realistic than the fixed parameters of frequentist null hypothesis testing. Is it reasonable to state that a population mean is exactly equal to some value? Bayesian statistics allow us to express our uncertainty about the values of parameters and measure precisely how much our uncertainty is reduced after we observe the outcomes of our experiments.

Third, the Bayesian analysis is based on a model of the data specified *a priori*, and therefore does not require the analyst to rely on models that are known to be false or true only “in the limit,” when the sample of data becomes infinitely large. Linear regression, for example, states that the relationship between dependent and independent variables is a weighted sum with Gaussian error, a descriptive model that we can almost always, with some thought, demonstrate to be false for real-world systems. Why not perform our analyses from the perspective of a model that has some explanatory power?

Fourth, the questions we can answer using Bayesian statistics are those of most scientific interest, and are of the form “What can I conclude about the hypothetical process that produced the data I observed?” in contrast to the confusing, less useful and philosophically problematic questions answered by null hypothesis testing: “What is the probability of getting the measurement that I obtained if I assume that changes in my independent variable had no effect?” The difficulties that statistics students encounter in interpreting *p*-values and confidence intervals stem from their quite natural desire to evaluate the null hypothesis with their data, rather than to evaluate the data with their null hypothesis.

Bayesian statistics can be mastered by students with modest mathematical and statistical backgrounds. Therefore it is particularly troublesome that, at this time, introductory statistics classes designed for psychologists and other social scientists focus almost exclusively on frequentist methods. This class is designed to introduce basic Bayesian ideas to psychologists trained in frequentist methods. At the end of this class, you will have learned:

- The distinction between frequentist and Bayesian statistics;
- The most common discrete and continuous probability distributions used in Bayesian inference;
- How to construct simple models for Bayesian inference on proportions, means and regression;
- How to choose appropriate priors for different simple data models;
- How to evaluate statistical hypotheses using the Bayesian posterior;
- How to choose between different models for a data set;
- How to perform simple simulations using R; and
• How to use the Bayesian analysis package Stan,

among other things.

Grades

This course will use the following fixed grading scale:

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<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>93%</td>
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<tr>
<td>A-</td>
<td>90%</td>
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<tr>
<td>B+</td>
<td>87%</td>
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<tr>
<td>B</td>
<td>83%</td>
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<tr>
<td>B-</td>
<td>80%</td>
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<tr>
<td>C+</td>
<td>77%</td>
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<tr>
<td>C</td>
<td>73%</td>
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<tr>
<td>C-</td>
<td>70%</td>
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<tr>
<td>D+</td>
<td>67%</td>
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<td>D</td>
<td>60%</td>
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Your grade will be based on 5 homework assignments, each assignment worth 10 points for 50% of your grade and one final project worth 50 points for 50% of your grade. Due dates appear on the class schedule. I reserve the right to modify the weights on the assignments and the project as I see appropriate.

Homework

Homework includes both your daily reading assignment and exercises from the book and given in class. The purpose of homework exercises is to give you the opportunity to practice computations that illustrate theoretical concepts presented in class. Homework and answer keys will be posted on Carmen. Due dates are noted on the course schedule and the Assignments link on Carmen.

Final Project

The final project will be an analysis of data that you have collected, either in your laboratory or data you have obtained online. If you have difficulty finding an appropriate data set, please come to me for assistance.

You will perform an analysis of your data with respect to one of the models we have discussed in class or a model of your own devising. You will be required to hand in the following: 1) an electronic file containing your data (all identifying information must be removed if the data involve human subjects); 2) all your code, with documentation, necessary to conduct the analyses; and 3) a 15-20 page writeup of your results.

The final project is “scaffolded” so that you will be required to turn in components of the project at times throughout the semester. Please see the project guidelines posted on Carmen for more information.
## Tentative Schedule:

<table>
<thead>
<tr>
<th>Monday</th>
<th>Wednesday</th>
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<tbody>
<tr>
<td><strong>Aug 21</strong></td>
<td>23 Introduction</td>
</tr>
<tr>
<td></td>
<td>Bolstad 1-3</td>
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<tr>
<td>28</td>
<td>30 Bayes’ Theorem</td>
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<tr>
<td>Probability Review</td>
<td>Bolstad 4(63-74)</td>
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<tr>
<td>Bolstad 4(55-66)</td>
<td>Gelman et al. 1.1-1.5</td>
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<td></td>
<td>Etz &amp; Vandekerckhove (2017)</td>
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<tr>
<td><strong>Sep 4</strong></td>
<td>6 Computation and Simulation in R</td>
</tr>
<tr>
<td><em>Labor Day</em></td>
<td><em>Bring your laptop</em></td>
</tr>
<tr>
<td>11</td>
<td><strong>Homework 1 due</strong></td>
</tr>
<tr>
<td>Discrete Distributions</td>
<td>13 Discrete Distributions (cont)</td>
</tr>
<tr>
<td>Bolstad 5(77-85)</td>
<td>Bolstad 5(83-89)</td>
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<tr>
<td>18</td>
<td>20 Continuous Distributions</td>
</tr>
<tr>
<td>Binomial and Poisson Models</td>
<td>Bolstad 7(121-129)</td>
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<tr>
<td>Bolstad 6(101-113)</td>
<td><strong>Data set due</strong></td>
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<tr>
<td>25</td>
<td>27 Beta-binomial Model</td>
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<tr>
<td>Continuous Distributions (cont)</td>
<td>Bolstad 8</td>
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<tr>
<td>Bolstad 7(129-134)</td>
<td>Gill 4(97-129)</td>
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<td><strong>Homework 2 due</strong></td>
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<tr>
<td><strong>Oct 2</strong></td>
<td>4 Issues in Inference</td>
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<tr>
<td>Bayesian vs. Frequentist Inference</td>
<td>Bolstad 9(170-178)</td>
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<tr>
<td>Bolstad 9(161-170)</td>
<td>11 Normal Model</td>
</tr>
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<td></td>
<td>Gill 3(69-76)</td>
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<tr>
<td>9</td>
<td><strong>Literature review due</strong></td>
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<tr>
<td>Bayes Factors</td>
<td>11 Normal Model</td>
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<tr>
<td>Kruschke 12</td>
<td>Bolstad 11(199-209)</td>
</tr>
<tr>
<td>Gill 7(216-224)</td>
<td><strong>Homework 3 due</strong></td>
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<tr>
<td>Benjamin et al. (2017)</td>
<td>18 Rstan</td>
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<td></td>
<td><em>Bring laptop and data set</em></td>
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<tr>
<td>16</td>
<td>25 Full Normal Model (Mean and Variance)</td>
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<tr>
<td>Normal Model for the Mean</td>
<td>Gill 3(69-76)</td>
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<tr>
<td>Bolstad 11(207-216)</td>
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<tr>
<td>23</td>
<td>18</td>
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<tr>
<td>Inference with the Normal Model</td>
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<tr>
<td>Bolstad 12(228-236), 15(297-307)</td>
<td>18</td>
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<tr>
<td>MONDAY</td>
<td>WEDNESDAY</td>
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<td>30</td>
<td>Nov 1</td>
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<td>Monday</td>
<td>November</td>
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<tr>
<td>Markov Chains and Sequential Sampling</td>
<td>Regression</td>
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<tr>
<td>Grinsted &amp; Snell</td>
<td>Bolstad 14(267-279)</td>
</tr>
<tr>
<td>(405-410,433-442,447-449,461-466)</td>
<td>Model due</td>
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<tr>
<td>Kruschke (165-173)</td>
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<td>6</td>
<td>8</td>
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<td>Wednesday</td>
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<tr>
<td>Inference in Regression</td>
<td>Using Rstan for Regression</td>
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<tr>
<td>Bolstad 14(280-286)</td>
<td>Bring your laptop and data set.</td>
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<td>13</td>
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<td>Monday</td>
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<tr>
<td>Linear Models</td>
<td>Multiple Regression</td>
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<td>Gill 5(145-155)</td>
<td>Gill 5(155-161)</td>
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<td>20</td>
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<td>Monday</td>
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<tr>
<td>Convergence and Mixtures</td>
<td>Thanksgiving Break</td>
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<tr>
<td>Gill 14(475-499)</td>
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<td>Bolstad 16</td>
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<td>Initial analysis due</td>
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<td>27</td>
<td>29</td>
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<td>Monday</td>
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<tr>
<td>Graphical Models</td>
<td>Hierarchical Beta-Binomial Model</td>
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<td>Lee &amp; Wagenmakers 6</td>
<td>Kruschke 9</td>
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<td>28</td>
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<tr>
<td>Monday</td>
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<td>Latent Class Models</td>
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<td>Check Carmen for Final Project due date</td>
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This is an interdisciplinary data analysis seminar focused on the application of principles of linear modeling in the context of linear regression analysis to exploring questions about mediated (i.e., indirect) and moderated (i.e., interaction) effects. We will spend part of the course talking about partitioning effects into direct and indirect components and how to quantify and test hypotheses about indirect effects, part talking about estimating, testing, and probing interactions in linear models, and part integrating moderation and mediation as “conditional process analysis” by discussing and how to conceptualize and test the contingencies of a mechanism. Computer applications will focus on SPSS and SAS using off-the-shelf code and the PROCESS macro available through www.processmacro.org and documented in the text for the course. It is assumed that you have taken a course in multiple regression and have done well or are otherwise comfortable with the principles of multiple regression analysis. No knowledge of matrix algebra is required or assumed.

**Instructor**

Dr. Andrew F. Hayes  
Office: Lazenby Hall 230  
Email: hayes.338@osu.edu  
Office hours: by appointment or happenstance  
Phone: I have no phone in my office.  
WWW: www.afhayes.com

**Learning Objectives**

By the end of this course, you will...

- be able to statistically partition one variable’s effect on another into its primary pathways of influence, direct and indirect.
- understand historical and modern approaches to inference about indirect effects in causal models.
- know how test competing theories of mechanisms statistically through the comparison of indirect effects in models with multiple mediators
- acquire an understanding of how to build flexibility into a regression model that allows a variable’s effect to be a function of another variable in a model.
- understand how scaling of variables influence parameter estimates and their interpretation.
- have the ability to visualize and probe interactions in regression models.
- have learned how to integrate models involving moderation and mediation into a conditional process model.
- have learned how to estimate the contingencies of mechanisms through the computation and inference about conditional indirect effects.
- know how to determine whether a mechanism is dependent on a moderator variable.
- be able to apply the methods discussed in this course using readily-available statistical software
- be in a position to talk and write in an informed way about the mechanisms and contingencies of causal effects.
What We Will and Will Not Cover

Topics covered:

- Path analysis: Direct, indirect, and total effects in mediation models.
- Estimation and inference about indirect effects in single mediator models.
- Multiple mediator models (parallel and serial).
- Mediation analysis with a multicategorical independent variable.
- Estimation of moderation and conditional effects.
- Probing and visualizing interactions.
- Multicategorical moderators and independent variables in moderation analysis.
- The effects of variable scaling and model parameterization on interpretation.
- Conditional Process Analysis (also known as “moderated mediation”)
- Quantification of and inference about conditional indirect effects.
- Testing a moderated mediation hypothesis and comparing conditional indirect effects
- Moderation in serial mediation models
- Mediation analysis in the two-condition within-participant design.

What is not covered:

- Dichotomous, ordinal, or count variable models or other models not based on OLS regression.
- Models involving latent variables or other methods requiring an SEM program.
- Nested data (i.e., multilevel models)
- Longitudinal data problems involving more than two waves of data
- “Potential outcomes” approach to mediation analysis

Required Readings and Other Materials

- A laptop computer with a version of SPSS or SAS installed (available at no charge through the web page of the Office of the Chief Information Officer). Make sure your laptop is charged sufficiently to make it through class.
- Data files available on CARMEN that have been downloaded on to your laptop.
- Various readings that are generally supplementary, in PDF form available through CARMEN.

Note: If there is no way you can get access to a laptop that you can bring to class regularly, see the instructor.

Evaluation

Your grade will be calculated based on a weighting of three components ranging between 0 and 100, using the weighting below. Grading scale: 92+ = A; 89-91: A-; 82-88 = B+; 75-81 = B; 70-74 = B-; 65-69 = C+; 60-64 = C; 50-59 = C-; 45-49 = D+; 40-45 = D; <40 = E. I do not “curve” my grading.
Attendance (25%)
You are expected to attend class, participate with your own questions when you have them, and contemplate the questions of others and my answers. At least some material not included in the book or my lectures will be delivered in response to questions, and you will be benefit from hearing those questions and answers. Thus, you will learn merely by attending class regularly even if you are just a passive observer of others most of the time. Attendance will be taken at the beginning of class, and it is worth 25% of your course grade. You do not need to have a perfect attendance record in order to receive full attendance credit.

In-Class Activities (25%)
Occasional activities will be provided in class and being there to experience these will aide in your learning of the material. These will take the form of very short quizzes or brief data analysis problems and/or interpretation of output. Sometimes these will be announced in the course prior to their administration, and sometimes they will be unannounced. Sometimes you will be required to work alone, and sometimes you may be allowed to work with one classmate. Your lowest activity mark will be discarded from the computation of your in-class activities grade. On occasions (if any) when you are allowed to work with another person, you will turn in the activity with both your names and you will receive the same mark regardless of who contributed to the answer and in what proportion. Your worst activity mark will be dropped from the derivation of this component of your grade (including if you received a zero on the activity because you were absent).

Midterm and In-Class Final Exam (25% each)
Fifty percent of your grade will be based on your performance on a midterm and final examination, each of which is worth 25% of your course grade.

Take-Home Midterm Examination. You will take a midterm examination during the week of March 5th. It will be distributed at the end of class on Monday March 5th and should be returned to Dr. Hayes in hard copy form no later than 3PM Friday March 9th. The exam will consist of various multiple choice, fill in the blank, and short answer questions. With the exception that follows, you are not to communicate with anyone else about the content of this exam or receive any kind of assistance when completing it. However, if you choose, you may work with one classmate on this exam. If you choose to do so, then of course you can communicate with this one classmate about the exam. In this case, you should turn in only one copy of the exam with both of your names on it. You will each receive the same grade.

In-Class Final Exam: You will take an in-class final examination on the day and time the registrar has assigned for this class, and it will take place in Campbell Hall 251. This date and time is Tuesday May 1st at 4:00-5:45PM. Like the midterm examination, the final exam will contain a variety of different question types, including multiple choice, fill in the blank, and short answer formats. It will be comprehensive in nature but will heavily favor material covered since the midterm exam.
Academic Misconduct
By faculty Rule 3335-5-487, “...it is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term ‘academic misconduct’ includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee.”

Violations of the Code of Student Conduct in this class, especially pertaining to academic misconduct, will be aggressively prosecuted through the procedures the university has set up to deal with violations of the Code. If I believe you have violated the Student Code, your case will be referred to the Committee on Academic Misconduct (see http://oaa.osu.edu/coam.html). Make sure that you understand the Code of Student Conduct, and familiarize yourself with “Ten Suggestions for Preserving Academic Integrity” available online at http://oaa.osu.edu/coamthinkers.html. A common sanction for violation of the academic section of the Code of Student Conduct by graduate students is failure in the course and suspension from the university. Repeat offenses and especially egregious violations of the Code can result in dismissal from the University.

The Code of Student Conduct can be found at http://studentaffairs.osu.edu/csc/.

Cell Phones and General Politeness
A ringing cell phone is annoying and a distraction to the instructor and others in the room. Please be respectful of those around you by silencing your cell phone prior to the start of class. If you anticipate that you will need to leave class early, please select a seat near the edge of a row or in the front of the room to avoid disrupting others when you leave. To maintain an atmosphere conducive to learning, please be courteous to other members of the class and treat them with the dignity and respect that you expect from others.

Use of Electronic Mail
There may be occasions where I will need to get in touch with you outside of regular class hours. Email will usually be the first means by which contact will be initiated. It is important that you check your OSU email account regularly, and make sure you purge your account of unneeded email so that new email can get through. If you do not use your OSU email address as your primary email account, please arrange to have your OSU email forwarded to your preferred account. For email forwarding, go to https://my.osu.edu/

Emergencies
In the event of an emergency, please carefully follow the directions of the teaching staff or, if deemed prudent by your own judgment, contact 9-1-1 or the University Police at 614-292-2525. Non emergencies requiring police intervention can be directed to 614-292-2121.

Tentative Nature of this Syllabus
Events that transpire over the term may require me to modify the administration of this course and therefore the syllabus. In the event I need to modify the syllabus, I will announce the modification in
class and on CARMEN. Ultimately, it is your responsibility to keep up with any such modifications and be aware of current policies, deadlines, etc.

### Students with Special Needs

The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I should register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. For accommodations needed related to an exam, seek the section of the syllabus above on examinations. **SLDS contact information:** slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

### Sexual Misconduct/Relationship Violence

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at http://titleix.osu.edu or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu

### Schedule of Lectures and Readings

This course is organized into units rather than individual lectures. We will spend what time is needed on each unit before progressing to the next, adjusting as needed with the goal of covering all of the material by the end of the semester in mind. The sequence of units and relevant readings can be found below. You are encouraged to read the book more than once as you will learning something new after each reading. You will also benefit from reading the supplementary readings available on CARMEN, although doing so is optional (though students in the quantitative psychology doctoral program should consider these required reading as well). Some of the material in this class has no corresponding supplementary reading.

#### UNIT 0: OVERVIEW AND REVIEW OF REGRESSION CONCEPTS

*This unit reviews the principles of ordinary least squares linear regression analysis, including the least squares criterion, construction and interpretation of the regression model, interpretation of model coefficients, and statistical inference.*

**Required reading**

Chapters 1 and 2
UNIT 1: STATISTICAL MEDIATION ANALYSIS

This unit introduce the basic concepts of statistical mediation analysis. Elementary path analysis rules and the estimation of total, direct, and indirect effects is covered for the simple mediation model (i.e., one mediator). The PROCESS macro for SPSS and SAS is introduced. Various approaches to inference about indirect effects, estimation of effect size, and the interpretation of the indirect and direct effect in standardized and unstandardized form are topics in this unit.

Required reading

Chapters 3 and 4, Appendix A

Supplementary primary readings for your interest


UNIT 2: MODERATION ANALYSIS

This unit describes the use of linear regression analysis for examining the contingencies of an effect. It focuses on the linear moderation model that allows one variables effect on another to be a linear function of another variable in the model. The conditional effect is defined. Methods of estimating such conditional effects, “probing” evidence of moderation, and visualizing moderated effects are described. Various myths about moderation analysis are described and debunked.

Required reading

Chapters 7 through 9 (you may skip sections 9.4 and 9.5)

Supplementary primary readings for your interest


**UNIT 3: CONDITIONAL PROCESS ANALYSIS I**

This unit combines the material from Unit 1 and Unit 2 into an integrated analytical model for examining the moderation of mechanisms. Topics include conditioning direct and indirect effects on moderators, quantifying the relationship between a moderator and indirect and direct effects, and approaches to testing whether a mechanism is moderated.

**Required reading**
Chapters 11, 12


**Supplementary primary readings for your interest**


**UNIT 4: STATISTICAL MEDIATION AND MODERATION ANALYSIS II**

This unit extends the principles of mediation and moderation analysis introduced in Unit I and II to models with multiple mediators or moderators, including the parallel and serial multiple mediator model, the comparison of indirect effects, mediation analysis when the independent variable is multicategorical, moderated moderation, and mediation analysis in the two-condition within-subject design.
Required reading
Chapters 5, 6, 9 (sections 9.4, 9.5), 10


Supplementary readings for your interest


**UNIT 5: ADVANCED TOPICS IN CONDITIONAL PROCESS ANALYSIS**

*This unit addresses complex problems in conditional process analysis as time allows, including models that combine multiple mediation and moderation; multicategorical independent variables; partial, conditional, and moderated moderated mediation; editing preprogrammed models in PROCESS and creating your own models.*

Required reading
Chapter 13, Appendix B


Fundamentals of Factor Analysis
Psychology 7820
Fall 2017

Lecture      Tuesdays and Thursdays, 2:20-3:40pm
             Psychology Building (PS) Room 219
Instructor   Paul De Boeck, 232 Lazenby
debreck.2@osu.edu

Course overview
Factor analysis is an analysis of associations between variables in order (1) to find or evaluate underlying factors that can explain the associations or (2) to reduce a set of variables to a smaller set as a summary of the larger set (principal components analysis). The former is a model based approach, while the latter is purely descriptive. Typically the associations are correlation or covariance measures.

The factor analytic approach has been initiated and further developed within the domain of psychology for the study of intelligence and personality and within educational sciences for cognitive tests. It is now a broadly used approach in many disciplines, from engineering and chemistry to linguistics, marketing, and the social sciences, and it has led to the development of latent variable statistical models and structural equation models. Within the social sciences it is primarily based on individual differences because the correlations and covariance matrices that are analyzed are relationships between these individual differences.

The emphasis of this course is on laying foundations for a correct understanding, application, and interpretation of factor analysis in psychology and the social sciences. The course covers major topics in descriptive, exploratory and confirmatory factor analysis. It is intended as a first course in a miniature sequence that will gradually progress to courses on (1) factor based structural equation models for an investigation of relationships between latent variables and (2) item response theory for factor based measurement models.

Course objectives
At the end of the semester, you are expected to have a solid understanding of exploratory and confirmatory factor analysis and of principal component analysis so that you become an informed data analyst when conducting your own analysis, whether for thesis or dissertation research, or for other research projects that you will no doubt undertake in the future.

You should be able to demonstrate your ability to use major exploratory and confirmatory factor analysis software, and be able to list them confidently in the quantitative/statistical expertise section in your CV. You should be able to interpret the results from factor analysis and communicate the interpretation effectively, whether in your own work or for evaluating the adequacy of other researchers’ work.

For quantitative methodology students an additional objective is to become familiar with the general
conceptual framework for latent variable modeling, so that you may contribute to the methodological and statistical literature in the future.

**Software**
We will be using three software programs. The first is SPSS for principal component analysis and exploratory factor analysis. The second is Professor Michael Browne’s Comprehensive Exploratory Factor Analysis (CEFA; Version 3.04) program for exploratory factor analysis. CEFA is free and can be downloaded from: http://faculty.psy.ohio-state.edu/browne/software.php
The third is Yves Rosseel’s R package lavaan, which can be freely downloaded from the CRAN website. It will be used for confirmatory factor analysis.

**Assignments**
There will be three homework assignments, focused on:
- principal component analysis and matrix algebra (exercises prepared in class)
- exploratory factor analysis using CEFA
- confirmatory factor analysis using lavaan
All assignments must be typed and no more than five pages of text (double spaced).
Working together is fine but you must turn in independent reports.

In addition to these homework assignments, there will be a final exam with three open-ended questions. The final-exam will be a take-home exam, distributed on Nov 29 and due at 2pm Dec 6
You may consult any resource (lecture notes, books, articles, etc.), but you may not discuss any part of the exam with another person. Additional details will be provided closer to the end of the course.

Finally, each week there will be an easy in-class quiz on a topic of the class in question. The quiz will be prepared in class, so that one should be able to give a correct response based on one’s participation in the same class.

**Grading**
The final exam, the three assignments, and the set of in-class quizzes each count for 20%.

**Students with disabilities**
Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated, and should inform the instructor as soon as possible of their needs.
The Office for Disability Services is located in 150 Pomerence Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901; http://www.ods.ohio-state.edu/

**Academic misconduct**
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### Tentative Schedule

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<thead>
<tr>
<th>Week 1</th>
<th>Background</th>
<th>Aug 22 &amp; 24</th>
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<tr>
<td>Week 2</td>
<td>Matrix Algebra</td>
<td>Aug 29 &amp; 31</td>
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<tr>
<td>Week 3</td>
<td>Principal Components Analysis</td>
<td>Sep 5 &amp; 7</td>
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<td>Week 4</td>
<td>Principal Component Analysis</td>
<td>Sep 12 &amp; 14</td>
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<td>Week 5</td>
<td>Common Factor Model</td>
<td>Sep 19 &amp; 21</td>
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<td>Week 6</td>
<td>Exploratory Factor Analysis (EFA)</td>
<td>Sep 26 &amp; 28</td>
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<td>Week 7</td>
<td>EFA with SPSS</td>
<td>Oct 3 &amp; 5</td>
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<td>Week 8</td>
<td>EFA with CEFA</td>
<td>Oct 10</td>
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<td>Week 9</td>
<td>EFA with CEFA &amp; Rotation</td>
<td>Oct 17 &amp; 18</td>
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<td>Week 10</td>
<td>Confirmatory Factor Model (CFA)</td>
<td>Oct 24 &amp; 26</td>
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<td>Week 11</td>
<td>lavaan for CFA</td>
<td>Oct 31 &amp; Nov 2</td>
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<td>Week 12</td>
<td>lavaan for CFA</td>
<td>Nov 7 &amp; 9</td>
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<td>Week 13</td>
<td>Estimation</td>
<td>Nov 14 &amp; 16</td>
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<td>Week 14</td>
<td>Model Fit</td>
<td>Nov 21</td>
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<td>Week 15</td>
<td>Extensions depending on ...</td>
<td>Nov 28 &amp; 30</td>
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<tr>
<td>Week 16</td>
<td>Closing considerations</td>
<td>Dec 5</td>
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### Reading material

Five articles by way of documentation: to be determined.
Course notes will be made available by the instructor after each topic.

### Academic Misconduct

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### Sexual misconduct/relationship violence

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at [http://titleix.osu.edu](http://titleix.osu.edu) or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu.

### Disability Services

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Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.
Structural Equation Models
Psychology 7821, Fall 2016, 3 credits
Class meeting: Tues/Th 9:35 - 10:55, Jennings Hall 136

R. Cudeck
240K Lazenby Hall
cudeck.1@osu.edu, 614-292-1030
Office hour: Tues 11:00 - 12:00 or appointment

Rick Farouni
240D Lazenby Hall
farouni.1@osu.edu
Office Hour: TBA or appointment

This course is a survey of the main statistical models and methods of structural equation models. It is geared toward general PhD students in the social sciences who have taken a one year graduate level sequence in applied statistics such as Psy 6810/6811 plus a semester course in regression.

Requirements: Ten computer exercises (67%) plus final exam (33%). Computer exercises are due on the date assigned. You may turn in one exercise up to one week late. Missed homeworks lower grade by 1/3 letter. Please do not hand in unedited computer results.

Notes will be distributed in class

Tentative List of Topics

Overview, orientation, examples

Matrix algebra
  Types of matrices: Constant, identity, null, diagonal, square, symmetric, lower triangle
  Operations: Trace, addition, subtraction, multiplication (conformability)
  Scalar-matrix multiplication
  Determinant (memorize determinant of 2 x 2 matrix)
  Definition of a singular matrix
  Inverse matrix (memorize inverse of 2 x 2 matrix)

Basic statistics in matrices
  Mean vector
  Diagonal matrix of variances or standard deviations
  Correlation matrix
  Covariance matrix
  Multiple regression
  Regression equation
  Least squares criterion function
  Solving for the regression coefficients
  Predicting an individual response
Factor analysis
Principal Components \textit{(not a variety of factor analysis)}
Regression Model and Correlation Structure
Multiple Factors: Background
Estimation of the Multiple Factor Model
Analytic Rotation
How Many Factors?
Standard Errors of Estimate
Target Rotation
Restricted Factor Analysis
Test Theory Models

SEM: Major statistical components
Path diagrams
Mathematical representation of SEM models
Data model and covariance structure
LISREL model, RAM model, other versions
Identification and estimation
Models as approximations, model fit, model modification
Using correlations versus variances and covariances
Direct, indirect, total effects
Multiple populations
Mean structures
Missing data
Ordinal variables

SEM models
Regression: Simple, multiple, multivariate, sur
Measurement models for true scores
Factor analysis and more general latent variable models
Patterned correlation structures
Path analysis, latent variable regression
MIMC model
Longitudinal designs and latent growth curves
Reference lists and supplementary material for leisure reading

On-line SEM workshops at Friedrich-Schiller University (Germany)
  http://www.metheval.uni-jena.de/courses.php?&lang=en (hours and hours with the major SEM people)
Werner Wothke’s nice SEM workshop notes, based on sas calis
  http://smallwaters.com/ and click on "Intro to SEM"
Syntax and data files for 5 computer programs, from T Brown "Confirmatory factor analysis"
  http://people.bu.edu/tabrown/cfabook.html
AERA SEM-SIG links
  http://www.hawaii.edu/sem/sem.html
Keith Smolkowski’s list
Jim Steiger’s course, Intro to SEM
  http://www.statpower.net/SEM.html
Edward Rigdon’s page of links
  http://www2.gsu.edu/~mkteer/index.html
SEM Net (a listserv with lots of references)
  https://listserv.ua.edu/archives/semnet.html
Scientific Software
  http://www.ssicentral.com/lisrel/resources.html (several program guides here)
  http://www.ssicentral.com/lisrel/examples.html
  http://www.ssicentral.com/lisrel/advancedtopics.html
  http://www.ssicentral.com/lisrel/references.html
Computing

SEM is a small acronym that applies to a gigantic collection of models and methods for the analysis of several variables. After learning the concepts, the main goal of this course is to learn how to estimate and interpret SEMs. Thus computing is a big deal. The best strategy for computing is to build on the software you use most, and become familiar with it’s SEM library. R, STATA, SPSS, MATLAB, SAS are comprehensive statistical packages with excellent SEM modules. AMOS, RAMONA, EQS, lavaan (in R), CALIS, MPlus, LISREL are the main specialized SEM procedures. All these programs handle the popular SEM models equally well. At the same time, they each have a few specialized features that no other program can deal with. For the major varities of SEM, stay with the computer software that you and your research group routinely use.

I personally use SAS and LISREL. Both are available free of charge to OSU students. The student version of Lisrel is restricted to 16 variables and only plain text or SPSS SAV files can be imported. Otherwise it’s the full-featured program. http://ssicentral.com/lisrel/student.html

Two Important Administrative Issues

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Fundamentals of Item Response Theory
Psychology 7822

When?
Spring 2018
Thursday 4:00-6:45 #36183

Where?
Lazenby Hall room 220

Instructor
Paul De Boeck
Lazenby Hall room 232
phone office: 614-292-4131
email: deboeck.2@osu.edu
office hours: Thursday3:00-4:00 or by appointment

Aims
The aims of the course are:
- to give students a deep understanding of a powerful methodology for measurement based on test data and more generally for the analysis of categorical data in the presence of individual differences,
- to bring students to the level of proficient users of item response models and software for these models starting from test data and other types of categorical data.
The course helps for measurement-based research and to prepare for jobs in test companies and for other measurement-related jobs.

Item response theory (IRT) has become increasingly popular in the past few decades in a wide variety of fields, such as clinical psychology, cognitive psychology, industrial and organizational psychology, education, marketing, consumer behavior, educational measurement, political sciences, and health sciences. It has become an essential feature of the modern measurement landscape and a powerful data analysis and statistical modeling tool for categorical data with individual differences.

It can be used for a variety of purposes:
- analyzing data from tests, surveys, and experiments
- developing and adapting tests and surveys
- maximizing the efficiency of tests and surveys

Overview
The course consists of four sections. Section 1 is an introduction and Sections 2 to 4 cover different IRT approaches and models and will be taught in a hands-on way based on existing data sets and easy-to-use software packages.

Section 1: Why IRT?
1. Before introducing IRT, classical test theory will be discussed.
   It is the predecessor of IRT but the basic concepts are still valid. However, IRT has a much broader scope and a much larger potential.
2. We start from the interests students have who take the course.
Based on these interests different focus topics will be selected going through Sections from 2 to 4. Here is a tentative list, to be completed:
- measurement of latent variables
- levels of measurement: ordinal, interval, ratio
- multidimensionality
- relationship with factor models and multilevel models
- pre-post designs
- measurement of change
- accurate confidence intervals
- item selection and short forms
- analysis of binary data,
- analysis of rating scale data
- decision making data
- group differences
- measurement invariance and fair tests
- surveys
- measurement precision and reliability
- *

IRT can be used as a tool for measurement, for exploration, for data analysis. It is different from classic test theory, from analysis of variance, from multiple regression analysis, from multilevel modeling, etc., but it also shares many aspects with these other approaches. Seeing the relationships will yield a better understanding of IRT and of these other approaches.

Section 2: IRT as generalized linear mixed modeling
Depending on the points of interest selected in the first section, IRT will be illustrated as a generalized form of linear mixed models (GLMM). This opens new perspectives within and beyond the measurement domain, and in disciplines other than where IRT has been used thus far.

Software: lme4 package in R and more in particular the glmer() function, a simple and flexible software for mixed models. No advance knowledge of R is required for the course. Students will receive scripts with code to use the glmer() function.

Section 3: Common IRT models and concepts
Again depending on the points of interest selected in the first section, IRT will be illustrated with typical IRT software for the well-known one-, two-, and three-parameter models, the graded response and partial credit models, multidimensional IRT, etc., and for item and test information, item fit, person parameter estimation, measurement invariance, differential item functioning, etc.

Software: flexMIRT version 2 (Cai, 2013), iitoyos (Partchev, 2011) and ltm in R (Rizopoulos, 2012). iitoyos and ltm are available in R, and students will receive a free license for flexMIRT version 2. Students will also receive scripts with code to use iitoyos and ltm, and syntax files to use flexMIRT.

Section 4: Special IRT topics
The first special topic is IRTree modeling of rating scale data. Rating scale data are either analyzed as interval-scale data or as ordinal data, using either linear factor analysis or ordinal factor analysis and IRT for ordered-category data, respectively. Unfortunately, rating scale data are neither interval-scale nor fully ordinal but only partially ordinal. In order to respect the partially ordinal nature of the data, IRTree models can be used. Other special topics depend on the interests of students. For example, models for learning and
growth and be discussed.

**Software:** flirt version 1.15 (Jeon, Rijmen, & Rabe-Hesketh, 2014a and b), downloadable from http://faculty.psy.ohio-state.edu/jeon/lab/flirt.php.

**Software**

Bates, D., & Maechler, M (2010). *lme4: Linear mixed-effects models using S4 classes.* [http://CRAN. R-project.org/package=lme4](http://CRAN. R-project.org/package=lme4).


**References reading material**


# Schedule

<table>
<thead>
<tr>
<th>Weeks</th>
<th>Topics</th>
<th>Assignments and deadlines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1-2 Jan 11 &amp; 18</td>
<td>Section 1</td>
<td></td>
</tr>
<tr>
<td>Week 3-6 Jan 25 to Feb 15</td>
<td>Section 2</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; project initiated in week 5</td>
</tr>
<tr>
<td>Week 7-12 Feb 22 to Mar 29</td>
<td>Section 3</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; project due Feb 25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; project initiated in week 9</td>
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<tr>
<td></td>
<td></td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; project due April 1</td>
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<tr>
<td></td>
<td></td>
<td>Final project formulation due April 5</td>
</tr>
<tr>
<td>Week 10 Mar 15</td>
<td>Spring break</td>
<td></td>
</tr>
<tr>
<td>Week 13 – 15 Mar 22 to Apr 19</td>
<td>Section 4</td>
<td>Final project due April 26</td>
</tr>
</tbody>
</table>

## Grading Policies

There are no exams. Instead:
- For 3/5 of your grade there will be two small projects. Each of these two counts for 30 of the 100 points. You can either do the default project offered by the instructor or a project of your own choice. The projects involve software applications with a brief report: output, graphics where helpful, and a verbal description of the results. The length of a brief report is 1 to 2 pages, output and graphics not included.
- For 2/5 of your grade there will be a final project. It counts for 40 of the 100 points. The topic of your final project is up to you and implies an IRT analysis of data you have which you would like to analyze, or of data provided to you if you do not have your own data. The length of the report is between 3 and 5 pages.

We will discuss plans for the final project in greater detail as we progress through the semester. Students who would have a final project in mind earlier, can contact the instructor.
Sexual misconduct/relationship violence:

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at http://titleix.osu.edu or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu

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Background: A course at the graduate level in regression, including knowledge of matrix algebra are both assumed. Familiarity with a statistics package that includes a module for mixed model analysis such as lme/lme4/lmer in R, MIXED in SPSS, nlm in MATLAB, xtmixed in STATA, HLM and SUPERMIX from Scientific Software, MLwiN from Univ of Bristol, XLSTAT for Excel, MIXED from NCSS, or MIXED/NLMIXED in SAS.

Requirements: Ten computer exercises including a final comprehensive project, due on the date assigned. You may turn in one exercise up to one week late.

Procedure: Detailed notes, data sets, and worked examples distributed at every class meeting. Extensive practical experience with realistic problems is the focus of this course.

Tentative List of Topics
1. Introduction
2. Graphical displays and classical procedures for repeated measures
3. Linear models for longitudinal data
4. Extended linear models: Multiple groups and unbalanced data
5. Maximum likelihood estimation and missing data analyses
6. Issues in selecting a model
7. Covariance structures for residual variables
8. Transforming the independent variable: Centering
9. Random coefficient models
10. Linear mixed-effects model
11. Level-two covariates
12. Segmented polynomials
13. Nonlinear models
14. Multi-level models for cluster sample problems
15. Meta-analysis
16. Computation issues and software every class day as we go
Readings

Because repeated measures designs are important in many disciplines, the literature on appropriate statistical methods is voluminous, varied, growing. Algebraic notation, mathematical level, point of view and scientific orientation vary considerably. There is interesting recent work in statistics journals, especially *Biometrics* and *Applied Statistics*. This literature is well worth the investment to follow, but can be heavy sledding for behavioral scientists. In this course, articles that are especially relevant for particular topics will be referred to as each topic is covered. For an introduction to the subject from various perspectives as well as more in-depth coverage of selected topics, here are many of the more important books.

Book-length Treatments


Selected Reviews and Applications


Three Important Administrative Issues

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(3) **Accommodations**: The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. You are also welcome to register with Student Life Disability Services to establish reasonable accommodations. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.
Course Goals:

This course is the first in a two course methodology sequence required of all doctoral students in the social psychology program. This first course provides an introduction to issues of research design and scientific inference associated primarily with laboratory-based experiments in social psychology, though some issues with quasi-experiments and field studies will also be addressed. The companion second course focuses on reviewing research including empirical articles and grants as well as literature and conceptual review papers, though the current course will also introduce manuscript reviewing to a limited extent.

Topics to be covered in this course include hypothesis formulation and operationalization; assessing the validity of experiments (statistical, internal, construct, external); conceptual versus exact replications; moderation versus mediation of effects; different kinds of dependent measures; artifacts; critical tests of theories; and ethics of experimentation with human participants. For a reasonable one chapter overview of the content of this course, see:


Texts that can serve as useful references include:


Readings will be available on CANVAS one week before the class period at which they will be discussed. Students are responsible for downloading and making copies of these readings from the CANVAS site. In addition to the weekly readings, students will be responsible for five short papers, five sets of discussion questions, making oral presentations, participating in class discussion, and taking an exam that covers the course content.

Grading: Grades for the course will be based on the following:

1. Five two page papers (due by e-mail to petty.1@osu.edu by noon on class day; double spaced; 400-600 words) = 35% (7% each)
2. Weekly class participation + biweekly discussion questions (due at 10 pm the night before class, e-mailed to petty.1@osu.edu), and any oral reports = 35%
3. Final Exam = 30%
## Class Meetings and Topics

<table>
<thead>
<tr>
<th>Week</th>
<th>DATE</th>
<th>COURSE TOPIC</th>
<th>PAPER GRP.</th>
</tr>
</thead>
<tbody>
<tr>
<td>W1.</td>
<td>August 28, 2017</td>
<td>Introduction to the Course and Basic Concepts</td>
<td></td>
</tr>
<tr>
<td>W2.</td>
<td>September 11, 2017</td>
<td>Generating Hypotheses to Test</td>
<td>A1</td>
</tr>
<tr>
<td>W3.</td>
<td>September 18, 2017</td>
<td>Causality and Statistical Validity (Part 1)</td>
<td>B1</td>
</tr>
<tr>
<td>W5.</td>
<td>October 2, 2017</td>
<td>Replicability of Research (Part 1)</td>
<td>oral reports</td>
</tr>
<tr>
<td>W6.</td>
<td>October 9, 2017</td>
<td>Replicability of Research (Part 2) solutions? .005</td>
<td>B2</td>
</tr>
<tr>
<td>W7.</td>
<td>October 16, 2017</td>
<td>Internal Validity</td>
<td>A3</td>
</tr>
<tr>
<td>W8.</td>
<td>October 23, 2017</td>
<td>Construct Validity/Dependent Variables</td>
<td>oral reports</td>
</tr>
<tr>
<td>W9.</td>
<td>October 30, 2017</td>
<td>REVIEW #1</td>
<td>B3</td>
</tr>
<tr>
<td>W10.</td>
<td>November 6, 2017</td>
<td>External Validity and Generalizability</td>
<td>A4</td>
</tr>
<tr>
<td>W11.</td>
<td>November 13, 2017</td>
<td>Mediators, Moderators and Interaction Effects</td>
<td>B4</td>
</tr>
<tr>
<td>W12.</td>
<td>November 20, 2017</td>
<td>REVIEW #2</td>
<td>A5</td>
</tr>
<tr>
<td>W14.</td>
<td>December 4, 2017</td>
<td>Ethics in Research</td>
<td>oral reports</td>
</tr>
</tbody>
</table>

FINAL EXAM (Wednesday, December 13, 2017; 2:00-3:45 pm)
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Academic misconduct of any kind will not be tolerated. I will enforce departmental and university policies on this issue.

**Sexual misconduct/relationship violence:**
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Special Topics in Quantitative Psychology (Psych 7896)

Spring 2018

Syllabus

Class meetings: Monday, 12:10–2:00 p.m.
Psychology Building, room 35

Instructor: Paul De Boeck
Office: Lazenby Hall, room 232
E-mail: deboeck.2@osu.edu
Phone: 614-292-4131
Mailbox: By room 224 in Lazenby Hall
Office hours: Thursday 3:00-4:00pm

Course Overview

This course is required in principle for all quantitative psychology graduate students and will run over the length of the regular academic year (fall and spring semesters). Students can opt out only with the explicit approval of their advisor. The goals of this course are to familiarize students with ongoing research in the field of quantitative psychology, prepare students to present their own work, and encourage students to explore other content areas and begin viewing them through a quantitative lens.

Familiarize students with ongoing research

Throughout the academic year, students will attend weekly meetings that feature talks from OSU faculty, external visitors, and their fellow graduate students. This will allow students to remain up to date with work being done by faculty and students here at OSU and by researchers in the field at large. In a typical year, we anticipate having several visitors from off campus to speak about their research. Our non-student speakers, both internal and external, will often represent the cutting edge in quantitative research.

Prepare students to present their own work

Each student will be required to make one oral presentation in this course during each year he or she is a student in the program. Ideally, this will be a talk about ongoing or completed research the student is engaged in. Giving talks is a tremendously important part of professional life for quantitative researchers, regardless of the setting. Faculty will work with students to polish their presentation skills in a comfortable environment to prepare them for job talks and presentations at academic conferences.

Encourage students to explore other content areas

To be an effective quantitative psychologist, it is important to be able to relate to and make connections with other content areas. These connections can take the form of a particular focus in one allied content area in which the student has deep expertise, or in a general ability to be able to quickly “get up to speed” in an additional content area. Both are reasonable
ways to proceed, but one or the other is viewed as necessary to function effectively as a quantitative psychologist.

**Grading Policies**

All students will be assigned a grade for this course (e.g., A, A–, B+, B, …). Grades will be based on three components:

1. Each student is required to give a presentation once a year: a relatively short 25 minute talk, or, upon request a 45 minute talk. Ideally, this talk should be on research the student is planning, conducting, or has completed. The student presenter should contact the discussant (see component 3) no later than one week before the talk in order to agree on how the discussant will be informed on the content of the presentation.

2. Once a semester, each student will attend a talk in another content area. This can be another area within psychology or in another department entirely. The area or department should be one that is potentially amenable to quantitative methods. If you are not sure whether a particular talk would satisfy this requirement, contact the instructor. Students are expected to prepare a brief paper (no more than two pages) summarizing the main theme of the talk in five lines and linking something from the talk to their own research or to briefly present the main theme and the link they saw with their own possible research. The papers should be emailed to the instructor before the first day of finals each semester and the short presentations are scheduled for the last seminar of the semester. Students will be assigned at random to one of two groups: either with presentation in the Fall semester and paper in the Spring semester, or the other way around.

3. Students are expected to be actively involved in the weekly meetings. To be involved, you must first be present. Attendance is mandatory. Absences that are not approved prior to their occurrence will negatively affect your final grade. Each student is also required once a year to be discussant for a presentation, which implies that a few questions are asked or remarks are made. Beyond attendance and being discussant, we expect students to actively participate in the sessions. Obviously not every student will ask a question or make a comment on a weekly basis, but students should try to contribute whenever they can, also when they do not have the role of discussant. Failing to speak during any of the meetings in an entire semester will negatively affect your final grade.

The grade assigned for each semester will be based on the tasks completed that semester. For example, in both semesters the student is expected to complete numbers 2 and 3 above (number 3 with or without being discussant). In the semester in which the student does not make a presentation, these will be the elements which determine the final grade. In the semester in which the student does make a presentation, all three elements will determine the final grade. The presentation is worth 60 points, papers are worth 20, and class participation is worth 20 (including being discussant). Thus, in non-presentation semesters the point total will be 40 and in presentation semesters it will be 100.

**Other Policies**

1. When an outside speaker is visiting, students will be expected to meet with the speaker during pre-arranged lunches. This is contingent on each student’s availability, and on other practical considerations.
2. When an outside speaker is visiting students may be asked to read one or two relevant papers to help prepare for the talk and the meeting with the speaker.

**Academic Misconduct**

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Goals of the Seminar
The purpose of this ongoing seminar is to promote the continued development of professional skills for our Ph.D. candidates in BN and NGP, as outlined in the following learning goals.

1. **Effective Communication in the Presentation of Results.** Each student will present their most recent research results in the fall or spring semester. These talks provide an important opportunity for students to “think on their feet” in response to questions or critiques.

2. **Exposure to Foundational Areas of Behavioral Neuroscience.** Students will read classic and contemporary research or review papers outside of their particular research domain and attend talks by outside speakers. The resulting discussions will serve to broaden the students’ area of expertise into domains that are contemporary and foundational to the growth of the field.

3. **Become Familiar with Issues Pertinent to Behavioral Neuroscientists.** Students will participate in assignments and discussion on issues related to performing neuroscience research including ethics, rigor and reproducibility, methods, statistics, etc.

Class schedule*

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic Covered in Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/9</td>
<td>Introduction</td>
</tr>
<tr>
<td>1/16</td>
<td><em>Assignment #1: Rigor and reproducibility in rodent behavioral research</em></td>
</tr>
<tr>
<td>1/23</td>
<td><em>Journal Club: Angela, Caitlin</em></td>
</tr>
<tr>
<td>1/30</td>
<td><em>Journal Club: Josh</em></td>
</tr>
<tr>
<td>2/6</td>
<td><em>Assignment #2: Method paper</em></td>
</tr>
<tr>
<td>2/13</td>
<td><em>Journal Club: Joe, David</em></td>
</tr>
<tr>
<td>2/20</td>
<td><em>Journal Club: AJ, Chloe</em></td>
</tr>
<tr>
<td>2/27</td>
<td><em>Journal Club: Tyler, Lars</em></td>
</tr>
<tr>
<td>3/6</td>
<td>Research presentation: Dr. Zach Weil, Title TBA</td>
</tr>
<tr>
<td>3/13</td>
<td><strong>No Class-Spring Break</strong></td>
</tr>
<tr>
<td>3/20</td>
<td>Research presentation; Dr. Matt Paul, U Buffalo, Title TBA</td>
</tr>
<tr>
<td>3/27</td>
<td><em>1st year Student Presentations: Angela, AJ, and Tyler</em></td>
</tr>
<tr>
<td>4/3</td>
<td><em>Assignment #3: Attend the Denman Forum</em></td>
</tr>
<tr>
<td>4/10</td>
<td><em>4th year Student Presentations: David, Chloe</em></td>
</tr>
<tr>
<td>4/17</td>
<td><em>4th year student presentations: Lars, Joe</em></td>
</tr>
</tbody>
</table>

*Schedule subject to change. Any changes will be announced in class and via email.
1. **Assignments (15 points each, 45 points total):**
   - **Assignment #1: Rigor and reproducibility in rodent behavioral research.** Read Gulinello et al (2018) *Rigor and reproducibility in rodent behavioral research*. Neurobiology of Learning and Memory and come prepared to discuss in class on 1/16.
   
   - **Assignment #2: Method paper.** Pick a method that you currently don’t use in your research. Write a 3-5 page paper (double-spaced) on the method, how it is done, its advantages/disadvantages, etc...Also discuss how you would apply it to your own research.
   
   - **Assignment #3: Attend the Denman Research Forum.** Provide a list of 3 posters you reviewed.

2. **Journal club presentation:** The journal club topic this semester is “Stress and Mood-related Behavior”. Each student will be responsible for selecting a primary research article *published in the last 12-18 months* to present in class. Presentations must be at least 30 minutes long, and include a powerpoint presentation and leading discussion. All presenters must generate 2-3 questions for discussion based on the research article, as well as discuss any limitations to the research presented and follow-up experiments that would be interesting to do. The journal club presentation is worth **30 points.**

3. **Attendance and Participation:** There are no exams in this course so attendance is a must. More than one unexcused absence will result in a **10 point reduction** from the total points. All students will be expected to participate in journal club discussions and to ask **at least** 3-4 questions over the semester during student/faculty presentations. To facilitate participation in journal club discussions, each student will be expected to come to class with three talking points. These should be handed in at the end of the class. Participation is worth **30 points.**

**Grading**

Final grades will be based on standard breakdown percentages, out of 100 total points (e.g., 90 for an A-). The point breakdown is as follows:

- **Assignments (10 points each):** 45 points
- **Journal club presentation:** 30 points
- **Attendance and Participation:** 25 points
- **Total:** 100 points

**Academic Misconduct**

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**Disabilities Statement**

The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability
Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Sexual misconduct/relationship violence
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Psychology 8896
Advanced Seminar in Quantitative Psychology: Power Analysis
Autumn 2017

Time: Wednesdays, 9:00 – 11:45am
Location: Lazenby 220

Instructor: Jolynn Pek
Lazenby 228
pek.5@osu.edu

Office hours: Mondays, 9:00-10:00am or by appointment

Course Description

Power analysis is an important component to research design. In the context of limited resources, which should be responsibly expended, power analysis allows researchers to determine a range of sample sizes which would presumably provide adequate power to detect statistical significance of effect sizes. Underlying concepts to understanding and computing power will be discussed in relation to current methodological concerns in psychological science (e.g., replicability and reproducibility).

Students will learn how to determine an effect size and accompanying error variances required to compute power. Additionally, various approaches to computing power will be introduced such as using canned software (e.g., G*power, R pwr package, and SAS PROC POWER) as well as implementing Monte Carlo simulations to estimate power in R. Additionally, misconceptions, limits, and abuses of power analysis will also be discussed.

This course is appropriate for graduate students in psychology, education, communications, related social sciences, public health, and business. Evaluation will be based on three components: (a) Class attendance and participation, (b) a limited number of homework sets, and (c) power analysis project.

Course Objectives

This course is designed to provide students with basic concepts regarding how to compute power, and how to conduct power analyses for common research designs and analyses. Students would also become familiar with ongoing discussions of power in relation to replication.

Grading

There are three evaluated components in the grade:
(a) Class attendance and participation (30%): Did you read the readings and formed an opinion about them? For each week (beginning August 28), the readings posted in Carmen will serve as the topical focus. Everybody is to read the readings during the week (before class), and send two or more questions via Carmen which can be the focus of clarifying discussion during class by Noon on each Tuesday preceding class. During class on each Wednesday morning, we will address the questions via discussion or additional reading material. Students are allowed to miss one instance of submitting questions.
(b) Homework sets (30%): Can you compute power from canned programs? There will be two homework assignments which will involve computing power using canned programs. Homework reports should be 2-4 pages long involving power computations. Please deliver a printed copy to my (Pek) mailbox in Lazenby Hall. The mailbox is located around the corner from Lazenby 226.

(c) Project (40%): Can you compute power using Monte Carlo simulations OR review a special topic in power analysis? Additional details on project requirements will be provided at a later time.

Students are encouraged to discuss problems, but a required to submit their own report.

Extra Credit
An “extra credit” opportunity is available (up to 2%). If you find any video, presentation material, podcast, or document (e.g., blogs, .pdfs) which could be included either in the class discussion, or provide additional learning opportunities outside class, please email me (pek.5@osu.edu) the link or document. Contributions which I am unaware of will be credited as bonus points to your final grade.

Students with Disabilities
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### Tentative Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Meeting Day</th>
<th>Description</th>
<th>Grade Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>August 23</td>
<td>Preliminaries</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>30</td>
<td>P-values</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>September 6</td>
<td>Effect Sizes</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>13</td>
<td>Canned programs</td>
<td></td>
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<tr>
<td>5</td>
<td>20</td>
<td>Monte Carlo power analysis I</td>
<td>Assignment 1 due</td>
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<tr>
<td>6</td>
<td>27</td>
<td>Monte Carlo power analysis II</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>October 4</td>
<td><strong>No Class</strong></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>11</td>
<td>Autumn Break</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>18</td>
<td>Misconceptions I</td>
<td>Assignment 2 due</td>
</tr>
<tr>
<td>10</td>
<td>25</td>
<td>Misconceptions II</td>
<td>Project plan due</td>
</tr>
<tr>
<td>11</td>
<td>November 1</td>
<td>Replication: Type I error</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>8</td>
<td>Replication: Type II error</td>
<td></td>
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<tr>
<td>13</td>
<td>15</td>
<td>Replication: Other research characteristics</td>
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<tr>
<td>14</td>
<td>22</td>
<td>Thanksgiving</td>
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<tr>
<td>15</td>
<td>29</td>
<td>Replication: Measurement validity</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>December 6</td>
<td>Student presentations</td>
<td></td>
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<tr>
<td>17</td>
<td>13</td>
<td>Student presentations</td>
<td>Final report due</td>
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</tbody>
</table>
Psychology 6861

Research Design and Methodology

Fall 2016

Monday 11:00-1:45

Instructor: Julian F. Thayer, Thayer.39@osu.edu

CA: David Cregg, cregg.3@buckeyemail.osu.edu

Office: Psychology 133

Location: Psy 0115

Textbooks: Beyond Significance Testing, Rex B. Kline
Understanding the New Statistics, Geoff Cumming
Readings from Foundations of Behavioral Science Research, 2nd Ed,
Rosenthal and Rosnow

Software: ESCI, freeware accompanies the Cumming book
Statistica, Student trial version

The goals of this course are to introduce you to the fundamentals of research design and methodology. With this introduction you should be better able to design and conduct your own research. Moreover, you should be a better consumer of the research literature. My hope is to make this course both interesting and informative. My approach tends to be pragmatic. Whereas there will be discussions of abstract concepts the idea is to provide you with the tools to actually use the material we discuss. Therefore you should be thinking about how the material we cover might relate to your own research such as your first-year project or your Master’s thesis. Your final paper should serve as the culmination of our journey together as it relates to your own interests.

The course will cover two themes. The first theme will provide you with the basics including discussion of ethical considerations in research, issues of validity and reliability, sampling and selection effects, and an introduction to a theory of data. The second theme of the course will involve the discussion of specific research designs ranging from non-experimental or correlational designs to quasi-experimental and randomized experimental designs to case-studies and single-subject or small n designs.

Course assignments are primarily geared towards professional activity in research and teaching settings. Grading is based on a term paper, weighted as 60% of your final grade, a mid-term exam weighted as 30% of your grade, and class participation, weighted as 10% of your final grade.
Your term paper, which will be approximately 15-20 pages in length, is due on the last day of class. You will get the opportunity to submit a brief (1-2 pages) preliminary outline of your paper, due about halfway through the course. I will give you feedback on your outline and make suggestions for the final paper. The mid-term exam will be comprised of essay, short-answer, and multiple choice questions. Details on all of the above assignments will be provided at a later date.

**Class participation** points will be partially based on your taking part in class discussions. *Informed* participation in class discussions requires reading the assigned material in *advance of the class*. Attendance is expected, and is also part of class participation. Please see me ahead of time if you anticipate having to miss a class. In addition to the textbooks, additional readings will be required and made available throughout the quarter.

Any changes or adaptations to the schedule will be announced in class. Students are responsible for knowing about such announced modifications.

**Academic Misconduct**

All students at the Ohio State University are bound by the Code of Student Conduct (see [http://studentaffairs.osu.edu/pdfs/csc_12-31-07.pdf](http://studentaffairs.osu.edu/pdfs/csc_12-31-07.pdf)). Violations of the code in this class will be dealt with according to the procedures detailed in that code. Specifically, any alleged cases of misconduct will be referred to the Committee on Academic Misconduct. For good, concise, plain-English advice on how to stay out of academic trouble, see Ten Suggestions for Preserving Academic Integrity at [http://oaa.osu.edu/coam/ten-suggestions.html](http://oaa.osu.edu/coam/ten-suggestions.html)

**Students with disabilities**

This syllabus is available in alternative formats upon request. In addition, if you need an accommodation based on the impact of a disability, you should contact the instructor immediately. Students with special needs should contact the Office of Disability Services (ODS) at 292-3307 for certification if they have not already done so. Upon such certification, the ODS and the instructor will make every effort to accommodate special needs. However, to ensure that evaluation of student performance in the course is conducted in a manner that is fair to all students, special accommodations will not be granted in the absence of ODS certification.
Course outline:

Week 1 (Aug. 29*): Introduction
Readings: R & R: Chapters 1-3: Nature of Behavioral Research; Development and Testing of Research Ideas; Reliability and Validity
Kline: Chapters 1-2: Changing Times; Fundamental Concepts
Cumming: Chapters 1-3: Estimating with Confidence; Confidence Intervals; Confidence Intervals Rather than p Values
Psychological Science New Guidelines: Editorial and Cumming paper

Week 2 (Sept. 12): R & R: Chapters 4-5: Experimental Designs; Quasi-experimental designs
Kline: Chapters 3: What’s wrong with Statistical tests
Cumming: Chapters 4-5: More on confidence intervals; Replication

Week 3 (Sept. 19): R & R: Chapters 6-7: Artifacts and their control; Gathering data
Kline: Chapters 4: Parametric effect size indices
Cumming: Chapters 6: Two simple designs

Week 4 (Sept. 26): Partitioning variance
Readings: Lecture Notes from Turner and Thayer

Week 5 (Oct. 3): Partitioning variance: Interactions
Readings: Lecture Notes from Turner and Thayer

Week 6 (Oct. 10): Mid-term exam

Week 7 (Oct. 17): How to do a literature search: Dr. Jos Brosschot, Leiden University

Week 8 (Oct. 24): R & R: Chapters 10-12: Selection of subjects and stimuli; Ethics; Pluralism and data analysis

Week 9 (Oct. 31): Partitioning Variance: Contrasts R & R: Chapter 21: Contrast analysis

Week 10 (Nov. 7): Contrasts in Statistica

Week 11 (Nov. 14): More on design: Kline: Chapters 8-9: Replication and Meta-analysis; Cumming: Meta-analysis models; Multivariate repeated measures replicated single-subject designs

Week 12 (Nov. 21*): Multilevel models: Dr. Derek Spangler, Ohio State University

Week 13 (Nov. 28): Meta-analysis: Dr. Julian Koenig, University of Heidelberg
Cumming: Chapter 7: Meta-analysis introduction

Week 14 (Dec. 5): Final paper due
Psychology 7897: Topics in Social Psychology
Psychology of Self-Control
Spring 2017
Meetings: Wednesdays, 12:00-2:00 pm, LZ 120

Instructor
Kentaro Fujita
Email: fujita.5@osu.edu
Phone: 247-2751
Office: 128 Lazenby

Course description
This class is a multi-disciplinary survey of research in self-control. In this course, we will discuss how researchers in a variety of fields (social, cognitive, developmental, and comparative psychology, judgment & decision-making, neuroscience, economics, and marketing) have modeled and measured self-control and self-control processes. Through discussion of weekly readings, students will examine when and why people make decisions and act in ways that are contrary to their best interests.

Course requirements
This class will focus mainly on THEORY and PRINCIPLES. The goal of this course is to uncover principles that cut across research areas and psychological phenomena. Hence, students in this course are expected not only to learn the major theoretical perspectives on self-control, but also how to evaluate and/or apply these ideas. The aim is to learn to look beyond specific research findings to see universals that apply to multiple domains. Although students will be reading empirical work in this class, the focus will be on models and principles, rather than on specific empirical studies and methodologies.

The primary goals in this course are to exercise critical thinking, integrate existing research into novel frameworks, and generate new hypotheses. The primary means by which this course will strive to attain these goals will be active discussion of ideas. The course requirements are designed to facilitate this process.

Thought Papers (25% of final grade)
Each week, students will submit to the instructor a one-page thought paper. These papers are due at NOON on MONDAYS. These papers are to be emailed to instructor, and cc:’ed to the Discussion Leaders (see below). Thought papers should record your reactions to the readings of the week, particularly questions or comments you would like to discuss in class. Discussion Leaders will also use these to facilitate discussion preparation.

All papers will be graded on a three-tier system. A check represents what the instructor expects from the average student in the class. A check-plus represents superior work, whereas a check-minus represents work that is below expectation. If you have questions or would like to discuss the grading of specific thought papers, please feel free to make an appointment to meet with the instructor.

Discussion Participation (25% of final grade)
This course is meant to be one in which all students share ideas and participate equally. As added encouragement to speak up, 25% of your final grade in the course will be based on your participation in class. As with the thought papers, discussion participation will be graded on a three-tier system.
Discussion Leaders (10% of final grade)
One to two student(s) each week will be assigned to lead discussion in class. Discussion leaders are not to rehash the reading material. Rather, prior to class, discussion leaders will read all thought papers for that week and note areas of confusion, contention, or discussion. Discussion leaders should use these observations to raise questions and highlight areas of interest as starting points for dialogue. Grading of this portion will be based on preparation and organization of discussion points. As with the thought papers and discussion participation, discussion leading will be graded on a three-tier system.

Final Paper (40% of final grade)
A term paper is due Friday, May 5 at NOON. Ideally, this paper would be an empirical proposal that would begin with a coherent argument on some issue covered in the course and end with a proposal for future research. You do not have to collect actual data to test your ideas, but doing so will not be discouraged as long as it does not violate any ethical guidelines. If you do not wish to write an empirical proposal, you may instead write a more theoretical review paper in which you present a coherent argument extending, reinterpreting, or resolving contradictions in research we have covered in the course. These papers should not simply be restatements of material we have already considered but need to be an original contribution to our understanding of self-control, broadly construed. You are encouraged to discuss your term paper idea with me before you begin writing. Note that there is no explicit page limit for these term papers, but do not add length under the illusion that it is necessarily increasing quality. Make every word count. The final paper will be graded using the standard OSU grading scheme (A, A-, B+, etc.)

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On Accessing Syllabus & Readings
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Schedule of Readings

January 11: Introduction

January 18: ***NO CLASS*** (Society of Personality and Social Psychology)

January 25: Behavioral Approaches/Delay Discounting

February 1: Explanations for Delay Discounting

February 8: Pre-Commitment & Counter-Active Control

February 15: Flying Under Radar, Licensing, and Balancing
February 22: Dual-Process and Dual-Systems


March 1: Ego-Depletion I


March 8: Ego-Depletion II


March 15: Hot vs. Cool


March 29: “Level” Approaches


April 5: Overcoming Self-Threats


April 12: Self-Control in the Social Context


April 19: ***NO CLASS*** (Midwestern Psychological Association)

FINAL PAPER DUE FRIDAY, MAY 5, NOON
Psychology 7872
Social Motivation

Wednesdays 2:15-5:00pm
Psychology 219

Instructor
Kentaro Fujita
Email: fujita.5@osu.edu
Phone: 247-2751
Office: 128 Lazenby

Course description
This seminar provides an overview of classic and contemporary research in the domain of social motivation. We will begin by investigating some basic human motivations: approach and avoidance, consistency, control, self-enhancement, and belongingness. We will then explore the implications of these motivations in a number of research areas, including the self, relationships, judgment-and-decision-making, and goal pursuit.

Course requirements
The goals in this course are to exercise critical thinking, integrate existing research into novel frameworks, and generate new hypotheses. Although many of the topics will be introduced with a brief background lecture, the main thrust of the course will be through active discussion of ideas and frameworks. The course requirements are designed to facilitate this process.

Thought Papers (30% of final grade)
Each week, students will submit to the instructor a one-page, single-spaced thought paper. These papers are due at NOON on MONDAY of the week class meets. These papers are to be emailed to instructor, AND to the discussion leaders (see below) to facilitate discussion preparation. Thought papers should record your reactions to the readings of the week, particularly questions or comments you would like to discuss in class.

Discussion Participation (30% of final grade)
This course is meant to be one in which all students share ideas and participate equally. As added encouragement to speak up, 30% of your final grade in the course will be based on your participation in class.

Discussion Leaders (10% of final grade)
Two students each week will be assigned to lead discussion in class. The format of the discussion is at the discretion of the discussion leader in consultation with the instructor. Discussion leaders are not to rehash the reading material. Rather, discussion leaders should raise questions and highlight areas of interest as starting points for discussion and dialogue. Grading of this portion will be based on preparation and organization of discussion points. Discussion leaders will also compile all thought papers submitted in a given week into a single document, which will be made available to the class via the Canvas website for the course.

Final Paper (30% of final grade)
A term paper is due on Monday, December 11. This paper can take one of two forms. The first is an empirical proposal that would begin with a coherent argument based on some issue covered in the course and end with a proposal for future research. You do not have to collect actual data to test your ideas, but doing so will not be discouraged as long as it does not
violate any ethical guidelines. A second options is to write a theoretical review paper in which you present a coherent argument extending, reinterpreting, or resolving contradictions in research that we have covered in the course. These papers should not simply be restatements of material we have already considered but need to be an original contribution to our understanding of social motivation, broadly construed. You are encouraged to discuss your term paper idea with me before you begin writing. Note that there is no explicit page limit for these term papers, but do not add length under the illusion that it is necessarily increasing quality. Make every word count.

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SCHEDULE

August 23: Introduction

August 30: Approach vs. Avoidance

September 6: Intrinsic vs. Extrinsic Motivation and Other Determinants of Engagement

September 13: Consistency

September 20: Control

September 27: Belongingness & Social Connectedness
October 4: Shared Reality


October 11: ***NO CLASS*** -- Society for Experimental Social Psychology

October 18: Self-Enhancement


October 25: Functions of Self-Esteem


November 1: Motivational Conflict in Response to Negative Feedback


November 8: Defending the Status Quo

November 15: Dyadic Relationship Motivations

November 29: Motivated Judgment & Decision-Making

December 6: Goal Structure & Dynamics
This course will review research findings from the study of cognitive development, particularly the development of thinking in the first decade of life. The goal of the class is to further our understanding of what is known about cognition in children, how changes in children’s thinking occurs, and how knowledge about changes in children’s thinking can be applied to improve children’s well-being.

The fact that this is a relatively small class, rather than a large lecture, presents us with some opportunities and some risks. The opportunities are for people to express themselves actively on a regular basis, rather than sitting back and just taking in what a lecturer tells them. The risk is that with no one giving a two-hour lecture, the quality of the class depends at least as much on what you do as on what I do.

For this reason, we need some ground rules to help us meet our goals. First, everyone should attend each class meeting. (If you experience a true emergency, let me know beforehand that you won’t be attending class.) Second, everyone is expected to actively participate in the discussion. This is essential if the class is to be a true seminar, rather than degenerating into a rotating lectureship. Third, everyone is expected to be at class on time.

Grades in the course will be based on class participation (30%), two take-home midterms (30%), and a take-home final (40%).

Class participation. Each of you will present and lead a discussion of two focus articles on a contemporary problem in cognitive development. The typical presentation is 15 minutes long and contains at least 5 substantive slides. Additionally, each of you should send discussion questions for each class to me and to the discussion leader at least 24 hours prior to class. The key criteria for my grading class participation will be high quality and reasonable quantity of contributions when you are not leading the discussion and posing important and stimulating questions and leading an interesting discussion when you are.

Midterms and final. The midterms and final will be based on the readings and the discussions. The midterms will include 5 short essay questions, each worth 20 points; the questions will be taken from the questions posed in the class, both by me and by you. The final exam will be similar to the midterm, but it will include 10 questions. Among these, 7 will be specific to the material after the midterm and 3 will be on material covered before the midterm. Due dates of midterms are indicated below.

Primary Text:

Conduct (http://studentaffairs.osu.edu/info_for_students/csc.asp). All instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct.

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Cognitive and Affective Influences in Decision Making  
Psychology 8896 – 3 units  
Dr. Ellen Peters

Overview
This course will provide an introduction to recent trends in decision research. We make choices and perceive risks in the world around us based on cognitive, affective, and motivational factors that influence how we perceive meaning and (sometimes) influence how we construct our preferences. The present course will cover theoretical distinctions starting with the role of valenced affect and discrete emotions in decisions. Integral as well as incidental sources of affect and emotion will be considered. Although recent research has discussed risk perceptions as primarily based in feelings, we will also cover important cognitive influences such as the role of number processing in risk perceptions and decisions. Both situational factors as well as individual differences will be considered in this course because, as the eminent learning theorist Hobart Mowrer once said, “To understand or predict what a rat will learn to do in a maze, one has to ‘know both the rat and the maze” (Mowrer, 1960, p. 10). Finally, we will discuss descriptive theory as well as its application to practical domains such as health and the environment, including the recently popularized notion of “choice architecture.”

Meetings
Thursdays 2:15-5:00pm  
Room 117 Psychology  
Class number 9951, 3 units  
Instructor E. Peters  
235 Psychology  
688-3477  
peters.498@osu.edu

Requirements
In addition to class attendance, readings, and participation, students will be required to prepare a proposal involving a focused literature review combined with a proposed empirical project that will shed light on an existing question in the literature.

Goals and procedures
Do we have well-established preference or labile ones? Can emotions be rational? Are cognition and emotion separate systems? How does your numeric ability influence your feelings about choice options? How does it influence some common judgment and decision biases? What does psychological theory say about how to help people to improve their decisions? These are some of the questions we will explore in this course, an introduction to emerging themes in judgment and decision making. The lectures and discussions will be coordinated to complement your weekly reading, which you should do before each class session.
Course components and grading
Grading will be based on your cumulative point total for the components listed below. There will be no grading curve; all students can earn an “A” if they acquire enough points.

(1) **A brief proposal = 50% of your grade**
You will write a mini-NSF-style proposal (typed, double-spaced, and up to 15 pages).
*Alternative:* You can work with another student in class on this proposal, but note that I will expect joint projects to be significantly better than individual ones and will grade accordingly. Joint proposals, I think, have the potential to produce something much more interesting, but they are also more difficult to do well, so choose carefully.

The final proposal is due April 18 at the beginning of class (Week 15). The paper will count for 50 points. Further details on the assignment are on the last page of this syllabus.

(2) **Class participation = 50% of your grade**
- A sizable portion of material covered in class will supplement the assigned readings. It is important, therefore, to attend and participate in each class. Although I will lecture for part of the time, each class will include some discussion of interesting questions and ideas. I expect that everyone will have something to contribute and I encourage you to come to class prepared to discuss the readings either by raising questions and comments about the articles or by relating the material to your own research, experience, or current events.

- Finally, on the Tuesday prior to each class time (by 5pm), you should email me with 2-3 comments or questions about the readings. You should bring a written copy of your comments or questions to each class period as well.

- Your class participation will be worth the other 50 points of your final grade. I will determine your points based on your comments/questions above and how much effort you put into making the class work. If you feel uncomfortable about class participation, for whatever reason, come see me in the first 2 weeks of class and we will find some way around that.

Grades for all components of the course will be converted to percentages and averaged using the weights given above. Your final grade will be computed using the OSU standard grading scheme summarized below.

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<tr>
<th>Grade</th>
<th>A</th>
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Overview of topics and schedule – All required readings will be posted on Carmen.
Note: There may be some changes to the reading schedule. Material sometimes takes longer
than expected and sometimes students want to stay with particular topics for more time than
originally allotted. Any schedule adjustments will be announced in class.

Weeks 1 and 2 (1/10 and 1/17): Introduction/Overview
Readings for Week 2:
Review of Psychology, 60, 53-85. Read all sections except Memory (p 62-65), Learning
(p70-72), and subsections Choice From External Search through Goal Framing (p 60-62).
Harvey, N. Blackwell Handbook of Judgment and Decision Making (pp 3-18). Malden
MA: Blackwell Publishing Ltd.

Week 3 (1/24): How does integral affect (a faint whisper of emotion) influence risk
perceptions and decisions?
In T. Gilovich, D. Griffin, & D. Kahneman (Eds.), Heuristics and Biases: The
Psychology of Intuitive Judgments (pp. 397-420). New York: Cambridge University
Press.

Week 4 (1/31): Four functions of affect. How does the act of judging and deciding influence
affect and choice in turn?
Lichtenstein & P. Slovic (Eds.), The construction of preference, (pp. 454-463). New
York: Cambridge University Press.
choice. Journal of Marketing Research, 36, 143-159.

Week 5 (2/7): Do incidental affect and arousal unknowingly shape risk perceptions and
decisions?
As information:

As a motivator of information processing and decisions:
arousal on sexual decision making. Journal of Behavioral Decision Making, 19, 87-98.
3. Isen, A. (2008). Some ways in which positive affect influences decision making and
problem solving. In M. Lewis, Haviland-Jones, J.M., & Barrett, L.F. (Eds.), Handbook of
Week 6 (2/14): Does valenced affect matter?: The role of discrete emotions
(We’ll end class with Christopher Hsee at 4pm in PSY035)
tendencies shape anger’s influence on cognition. Journal of Behavioral Decision Making, 19, 115-137.
susceptibility: Appraisals, affective reactivity, and worldviews in the generation of a
stigma response. Risk Analysis, 24, 1349-1367.
Psychological Science, 11, 212-216.

Week 7 (2/21): Dual process theories and criticisms
The American Economic Review, 93, 1449-1475.
2. Keren, G. & Schul, Y. (2009). Two is not always better than one: A critical evaluation of
A neurocomputational perspective. Current Directions in Psychological Science, 18, 73-77.

Week 8 (2/28): Numeracy goes beyond comprehension
Numeracy and decision making. Psychological Science, 17(5), 407-413.
under risk: A protocol analysis and process model evaluation. Judgment and Decision
Making, 4, 20-33.

Week 9 (3/7): Numeracy goes beyond comprehension (cont)
(The short paragraph for your proposal is due prior to the beginning of class. Send it
electronically in .doc or .docx format)
decision making? Health Psychology, 30, 336-341.

Week 10 (3/14) No class - Spring break

Week 11 (3/21) No class – I am at a professional conference

Week 12 (3/28) Numeracy impact on health, finances, and the environment
What do patients need to recognize, think or do with health numbers? In J. Schulkin and
B. Anderson (Eds.), Numerical Reasoning in Judgments and Decision Making about
Health.
credit card use, payments, and debt: Causes and solutions. Journal of Public Policy &
Marketing.

**Week 13 (4/4): Numeracy and improving comprehension and use of numbers**

**Week 14 (4/11): Number intuitions**

**Week 15 (4/18): Choice architecture and papers due**
Optional readings

Week 2 - Optional reading (Introduction/Overview):

Week 3 – Optional reading (Integral affect):

Week 4 - Optional reading (Functions and Act of judging/deciding):

Week 5 - Optional reading (Incidental affect and arousal):

Week 6 – Optional reading (Discrete emotions):
• Smith & Ellsworth (1985).

**Week 7 - Optional reading (Dual process theories and criticisms):**

**Weeks 8 and 9 - Optional reading (Numeracy):**
• Ask me if you’re interested in other reading about numeracy measures

**Week 12 - Optional reading (Impact of numeracy):**

Week 13 - Optional reading (Numeracy and improving comprehension/use):

Week 14 - Optional reading:

Week 15 - Optional reading:
**Academic Misconduct:**

All students at the Ohio State University are bound by the Code of Student Conduct (see http://studentaffairs.osu.edu/pdfs/csc_12-31-07.pdf). Violations of the code in this class will be dealt with according to the procedures detailed in that code. Specifically, alleged cases of misconduct will be referred to the Committee on Academic Misconduct. It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct.

For good, concise, plain-English advice on how to stay out of academic trouble, see Ten Suggestions for Preserving Academic Integrity at http://oaa.osu.edu/coamtensuggestions.html

**If you miss a deadline:**

Students missing the weekly question/comment, final paper, or other deadline because of legitimate illness, injury, or serious emergency must do both of the following things:

1. Contact me in person, by email, or by phone (email is best) before the deadline.

2. Provide written documentation of your illness, injury, or emergency from an authoritative source (e.g., a physician’s note, a police report, a funeral announcement).

Remedial actions (if any) are at my discretion. Deadline extensions are not guaranteed, even if both of the above actions are taken.

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Your Proposal (Submit electronically in .doc or .docx format)

You will write a mini-NSF-style proposal (typed, double-spaced, and up to 15 pages) on a topic related to this course. The proposal will count for half your grade. It is intended to get you to think more deeply about the research topics in this course and to consider their relevance for your own research. The proposal should relate clearly to one or more of our course topics.

- A short paragraph in .doc or .docx format proposing your topic and a reading list (of 3-5 scholarly references) is due before class in Week 9, March 7th. Be sure to tell me how it relates to this course (if it’s not obvious) and that it is independent of proposals done for other courses (e.g., 708).
- The final proposal is due before class on Week 15, April 18th.

Your Project Description (see below) should be a maximum of 15 pages long. The paper should be double spaced in 12-point font. Figures and tables should be integrated into the text rather than being placed at the end. Cite and format references in APA style. Include page numbers in bottom right corner of each page.

Your early drafts are likely to be longer, and you should revise your paper multiple times so that it is tighter in its construction and better written. Quality of writing is important and will affect proposal grades. Quality of writing includes spelling and proofreading, clarity of expression, good sentence structure, logical organization, and many other intangibles. You should credit other authors for ideas that you use, but put it in your own words, where possible, rather than relying on a lot of quotes. It will read better if you do this.

Suggested number of pages (this is only a guideline):
Title page (separate page)
Project summary (1/2 – 1 page; see below for description)
Project description (see below for description; 15 pages maximum)
  Introduction: Background and Theory (3-5 pages)
  Proposed Research with figures and tables embedded (7-11 pages)
  Significance and Broader Impacts (1/2 - 1 page)
References (separate pages)

Project Summary: The proposal must contain a summary of the proposed research, not more than one page in length. It should be written in the third person and include an overview of your rationale for the proposed study(ies), a statement of hypotheses to be tested, methods to be employed, and anticipated results. It must clearly address in separate statements (within the one-page summary): the intellectual merit of the proposed activity and its potential broader impacts.

The Project Description should provide a clear statement of the work being proposed and must include: (1) a review of the relevant literature and rationale for the proposed research including hypotheses (and the relation of the proposed studies to your own work in progress, if applicable), (2) descriptions of your proposed study or studies (e.g., conditions, sample sizes, procedures, measures), (3) proposed analyses and anticipated results, and (4) a brief discussion of the potential implications of the research. On this last point, up to a page of the proposal should be devoted to the project’s potential broader impacts, including its potential benefits to the advancement of science and/or to society at large.

Let me know if you would like to see an example of a previously-funded NSF proposal focused on affect or on numeracy.
Psychology 7871: Social Cognition  
Autumn 2016  
Tuesday & Thursday 12:45PM - 2:05PM  
Smith Lab 2186

Instructor

Russell Fazio  
100c Lazenby Hall  
Phone: 688-5408  
E-mail: fazio.11@osu.edu

Course Overview

This course is intended to provide an introduction to research in social cognition. Social cognition is the study of the cognitive underpinnings of social behavior and the ways individuals think about our social world.

This class will meet for two 80-minute sessions a week. Approximately two-thirds of the sessions will be devoted to a lecture, although adequate time will be allotted for questions and commentary. These lectures will provide an overview of the historical developments with respect to a given issue within the social cognition literature. The other class sessions will be devoted to a discussion of a set of recent articles related to the general issues covered in the preceding meeting(s).

Course Textbook


This book of readings is a collection of classic journal articles from the social psychological literature on social cognition. It also includes valuable ancillary material introducing each major topic area.

Additional readings, including those pertaining to the discussion sessions, are available on the course’s Carmen website.

The following are excellent texts that can provide useful background information, if you desire additional information about any given topic.


Course Requirements

Readings are assigned for each class meeting, and are to be read prior to the class with which they are associated. Readings consist of journal articles reprinted in Hamilton’s reader or provided on Carmen.

Grades will be based on:

1. Midterm exam covering the first half of the syllabus and weighted 35% of the course grade. The midterm will be administered during class on October 18.
2. Final exam covering the second half of the syllabus and weighted 35%. The final will be administered during finals week. According to the Registrar’s final exam schedule, the exam is scheduled for Tuesday, December 13, 2:00-3:45.
3. Class participation weighted 20%. This includes contributions to the discussions in general, as well as the discussion that each student will be leading. Each of the discussion articles will be assigned to a student, who will assume the responsibility of: (a) preparing a single-page handout summarizing the reading for distribution to the class, (b) presenting a brief overview of the article, (c) offering observations about the research, and (d) generating issues or questions for class discussion.
4. Thought paper weighted 10%. Details regarding this brief (1000 words or less) paper will be provided approximately two weeks prior to the due date of September 30.

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Students with disabilities

The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. You are also welcome to register with Student Life Disability Services to establish reasonable accommodations. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.
Tentative schedule (subject to change)

August 23: Course introduction

August 25: Social perception and impression formation – Historical overview
   From Heider/Bruner/Asch to modern social cognition; Some basic concepts;
   The constructive nature of perception

Hamilton: Introductory Overview; Readings 1, 6, 22

Bruner, J. S. (1957). On perceptual readiness. *Psychological Review, 64*, 123-152. [Note: Reading 6 from the Hamilton volume is an abridged version of this article. I recommend reading the original article in its entirety.]

August 30: The rise of social cognition
   Priming and category accessibility

Hamilton: Readings 4, 9

September 1: Person memory
   Recall of expectancy-congruent versus incongruent information; Information processing goals

Hamilton: Preview Part 6; Readings 2, 7, 23, 24, 25

September 6: Discussion session


September 8: Memory as reconstructions of the past
   Expectancy-guided retrieval; False memories

Hamilton: Readings 33, 34
September 13: Discussion session


September 15: Probability estimation
Judgments under uncertainty; Heuristics

Hamilton: Preview Part 3; Readings 10, 11

September 20 & 22: Automaticity
Nonconscious processing; Automatically-driven attention, categorization, and behavior

Hamilton: Preview Part 4; Readings 13, 14, 15, 16

September 27 & 29: No Class – SESP

September 30: Thought paper, Due electronically by 5:00 PM

October 4: Discussion session


October 6: Dispositional Inferences
Attribution processes; Biases and errors; Spontaneous trait inferences; Self-inferences

Hamilton: Preview Part 5; Readings 17, 18, 19, 20, 21
October 11: Discussion session


October 13: No Class – Fall Break

October 18: MIDTERM

October 20: Review of Midterm

October 25: Stereotypes

Stereotype activation; The consequences of stereotypes for information processing; Their functional value

Hamilton: Preview Part 2; Readings 3, 8, 28, 29

October 27: Stereotype development

Hamilton: Preview Part 7; Reading 26

November 1: Discussion session


**November 3: Stereotyping from the perspective of the target**  
Attributional ambiguity; Stereotype threat

**November 8: Discussion session**


**November 10: Hypothesis testing**  
Confirmatory testing; Diagnosticity; Self-serving reasoning

Hamilton: Preview Part 8; Readings 30, 31, 32

**November 15: Expectancies and social interaction**  
The impact of expectancies on social interaction; Expectancy maintenance and confirmation

Hamilton: Readings 12, 27, 37

**November 17: Discussion session**


November 22: The affect ↔ cognition interface
   Effects of cognition on affect; Misattribution and emotion

Hamilton: Preview Part 9; Reading 38

November 24: No Class – Thanksgiving

November 29: The affect ↔ cognition interface
   Effects of affect on cognition; Affective consequences of counterfactual thinking; Emotion-congruent processing; Feelings as information; Affect and creativity

Hamilton: Readings 35, 36

December 1: Discussion session


December 6: Wrap Up

December 13: Final Exam, 2:00-3:45