Attention!

This is a representative syllabus.

The syllabus for the course when you enroll may be different.

Use the syllabus provided by your instructor for the most up-to-date information. Please refer to your instructor for more information for the specific requirements for a given semester.

Feel free to contact the Psychology Advising Office for any questions regarding psychology courses either by email (psychadvising@osu.edu) or phone (614.292.5750).

Thank you!
Psychology 3312
Memory and Cognition
Course Syllabus, Autumn 2017

Course: PSYCH 3312 Credits: 3

Prerequisites: Introductory Psychology (Psych1100, 1100K=H, 100 or 100H)
Not open to students with credit for Psych312

Website: https://carmen.osu.edu


Acknowledgement: I would like to thank Dr. Alex Petrov and Dr. Ralph Barnes for allowing me to borrow materials (and find inspiration) from their courses.

WELCOME! I look forward to meeting you and sharing with you the fascinating research conducted by cognitive psychologists. Memory and cognition (thinking, problem solving, decision making, creativity) are things we do daily (well, hopefully!)—I hope that by understanding the research, you have a greater understanding of human cognitive constraints and capabilities, and can put this knowledge to use in your personal and professional lives.

Course Overview
Memory and Cognition is an introduction to select topics in cognitive psychology, with an emphasis on memory. Research related to categorization, thinking, decision-making, problem solving, and creativity will be reviewed. The audience is undergraduate students with basic knowledge of psychology (prerequisite Psych1100).

Some topics we will cover:
• What is cognitive psychology and how does it fit into the broader framework of cognitive science?
• What methods do scientists use to study memory and cognition?
• What kinds of memory are there, and where does memory “reside” in the brain?
• What are strengths and weaknesses of different theories and models of memory?
• Could forgetting be a good thing?
• How does memory develop and change through infancy, childhood, and adulthood?
• Does visual and auditory imagery serve a purpose?
• How and why do people make concepts? How are they represented and stored in memory?
• Are humans logical, rational decision makers? How do we identify flawed arguments (or create better arguments)? What are barriers to ‘good’ decision making?
• What is a problem? How do people solve problems?
• What is creativity and is there a special “creative process”?
• How does one become an “expert”? How are experts different than novices?

Course Objectives
By the end of this course you should be able to:
• Summarize the main theories, concepts, and research findings in cognitive psychology
• Describe the methods that psychologists use to infer cognitive processes
• Describe the biological bases of how we remember, think, decide, and create
• Make connections from psychological research to your daily life and public policy. This includes the ability to be an educated, critical consumer of scientific research.
• Have critical thinking and job skills to make you successful in your chosen career (be it in psychology or something else completely)

APA Learning Goals and Lesson Objectives
The American Psychological Association (APA) Guidelines for the Undergraduate Psychology Major describes a set of learning goals and outcomes for psychology majors at the completion of the baccalaureate degree. The content and organization of this course is designed to help you meet these goals by learning and demonstrating the following abilities at the (B)accalaureate or (F)oundational level, as denoted below:

Goal 1. Knowledge Base in Psychology
  • (B) K1. Describe key concepts, principles, & overarching themes in psychology
  • (B) K2. Develop working knowledge of psychology's content domains
  • (F) K3. Describe applications of psychology

Goal 2. Scientific Inquiry and Critical Thinking
  • (B) S1. Use scientific reasoning to interpret psychological phenomena
  • (B) S2. Demonstrate psychology information literacy
  • (F) S3. Engage in innovative & integrative thinking & problem solving
  • (F) S4. Interpret, design, & conduct basic psychological research
  • (F) S5. Incorporate sociocultural factors in scientific inquiry

Goal 3. Ethical and Social Responsibility in a Diverse World
  • (F) E1. Apply ethical standards to evaluate psychological science & practice
  • E2. Build & enhance personal relationships
• E3. Adopt values that build community at local, national, & global levels

**Goal 4. Communication**
• (F) C1. Demonstrate effective writing for different purposes
• (F) C2. Exhibit effective presentation skills for different purposes
• (F) C3. Interact effectively with others

**Goal 5. Professional Development**
• P1. Apply psychological content & skills to career goals
• P2. Exhibit self-efficacy & self-regulation
• P3. Refine project-management skills
• P4. Enhance teamwork capacity
• (F) P5. Develop meaningful professional direction for life after graduation

**Course Materials**

The book is available for purchase from the university bookstore and many other vendors. Three electronic copies can be accessed through the OSU Library website. Additional required readings will supplement the textbook. The Carmen website ([http://carmen.osu.edu](http://carmen.osu.edu)) is an indispensable resource. All additional readings will be available for download (PDF) along with PowerPoint slides and videos. Updates to required and optional additional readings will be made during the semester. Reading list updates will be announced in class and on Carmen Announcements.

**Evaluation**
Your final grade in this course will be determined on the basis of these activities:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Getting to know you</td>
<td>5</td>
</tr>
<tr>
<td>TopHat quizzes</td>
<td>30</td>
</tr>
<tr>
<td>Exams (your top 3 scores)</td>
<td>165</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>200</strong></td>
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</tbody>
</table>

The maximum number of points for the course is 200, which are converted to a letter grade according to the following cut-off ranges:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Point Range</th>
<th>Grade</th>
<th>Point Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (93%)</td>
<td>186-200</td>
<td>C+ (77%)</td>
<td>154-159.9</td>
</tr>
<tr>
<td>A- (90%)</td>
<td>180-185.9</td>
<td>C (73%)</td>
<td>146-153.9</td>
</tr>
<tr>
<td>B+ (87%)</td>
<td>174-179.9</td>
<td>C- (70%)</td>
<td>140-145.9</td>
</tr>
<tr>
<td>B (83%)</td>
<td>166-173.9</td>
<td>D+ (67%)</td>
<td>134-139.9</td>
</tr>
<tr>
<td>B- (80%)</td>
<td>160-165.9</td>
<td>D (60%)</td>
<td>120-133.9</td>
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</tbody>
</table>
If you believe that your test and/or quiz results are incorrect, please let me know in an email no later than one week after the results are announced. Complaints or questions about test results, pop quiz results, or anything else that affects your grade will not be considered or discussed unless a written statement is emailed to meyer.218@osu.edu in advance. I will review your comment/question/complaint and answer by email, or set up a meeting to discuss the issue.

**Getting-to-know You (Carmen/Assignments).** I'd like to get to know you and find out what you hope to learn from this class. It’s five points for following instructions. How can you go wrong? Points deducted if you do not follow directions, and no points if you turn it in late.

**TopHat Quizzes.** We will have short pop quizzes in class on randomly chosen dates. We will use the Top Hat (www.tophat.com) classroom response system in class. You will be able to submit answers to in-class quizzes using Apple or Android smartphones and tablets, laptops, or through text message. If you respond through SMS on your phone, standard text rates apply. You may use your notes, but do not discuss answers with other students. Results will be posted on TopHat in class and scores will be periodically updated in Carmen. If you are unable to use TopHat, please email Dr. Meyer by September 6 for alternate arrangements.

Each quiz is worth 2 points: 0 points for no answer, 0.5 points for a wrong answer, and 2 points for a correct answer. Questions will typically be a multiple-choice question about the current or previous lectures. **To encourage attendance and to provide opportunity for extra credit, more than 15 quizzes will be given.** If you attend class regularly and review the previously covered material in preparation for each class, you will be rewarded with more than 30 quiz points and ultimately a higher letter grade. There are no make-ups on missed quizzes. If you forget your phone or mobile device, don’t worry; remember, more than 15 quizzes will be given.

Attendance is encouraged but not required, except on test dates.

Visit [TopHat Overview and Getting Started Guide](https://app.tophat.com/e/937791) for the Student Quick Start Guide, which provides a brief overview to get you up and running on the system. You must use the same email as Carmen (usually name.#@osu.edu) as the email account in TopHat for quiz points to count towards your grade. An email invitation may be sent to your school email account (if you don’t receive this email, you can register by visiting our course website at https://app.tophat.com/e/937791 The JoinCode is 937791. TopHat is free for you to use through a subscription through Ohio State, so do not purchase a subscription. Contact TopHat directly for support if you have technical issues.

**Exams.** There will be three in-class exams and one final exam. All exams are closed-book multiple-choice tests. If you miss an exam, it will be graded with zero points. Acceptable excuses for missing an exam are a death in your family, personal illness or the illness of your child or spouse, and university-sponsored events. I will need official documented proof of these events should they occur. **Makeup exams will only be given in cases of documented emergency or when prior approval has been given to miss the exam.** Makeup must be taken before results are discussed in class. Note that if you are not sick enough to go to the doctor,
you are not sick enough to miss the exam. If you are late for the test, you will be allowed to take it but you must submit your answer sheet by the closing time like everybody else. Bring a photo ID, a #2 pencil, and an eraser to the test room. The tests are based on material from the lectures, the textbook, the additional required readings, and on certain videos that are marked in the lecture slides and linked on Carmen. The three in-class exams are non-cumulative, whereas the final exam covers the material from the entire semester. Each exam is worth 55 points. Everyone can have a bad day. That is why your worst test score will be dropped from the evaluation. In other words, only the three best scores of the four tests will count toward your grade. The total number of points that can be earned for the exams is 165. If you are happy with your scores on the three in-class exams, you can skip the final. If you are unsure whether you should take the final exam, take the final exam – it can only improve your grade.

**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

**Disability Services**
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/.

**Official Announcements**
Official announcements will be made through Carmen. The syllabus is subject to revision. If you are not in attendance when announcements are made, it is your responsibility to find out about them by checking the Carmen site or asking classmates. Therefore, please check your official OSU email account and Carmen regularly. Failure to check the official email account or Carmen is not a valid excuse for missing a requirement.

**Course Calendar**
The course calendar is subject to change depending on the rate of progress through the material, student interest in alternative topics, and/or scheduling constraints.
<table>
<thead>
<tr>
<th>Wk</th>
<th>Dates</th>
<th>Topics</th>
<th>Required Reading</th>
</tr>
</thead>
</table>
| 1  | 8/23, 8/25| • Syllabus & Course Overview  
• Cognitive Revolution & Cognitive  
Science (Part I)                  | Chapter 1. Weisberg               |
| 2  | 8/28, 8/30, 9/1| • Cognitive Revolution & Cognitive  
Science (Part II)  
• Memory Span & Multi-Store Model       | Chapter 1. Weisberg  
Chapter 2. Weisberg                  |
| 3  | 9/4       | LABOR DAY - NO CLASS                                                  |
| 3  | 9/6, 9/8 | • Short-Term Store & Serial Position Curves  
• Working Memory (WM) Model & Central Executive | Chapter 2. Weisberg  
Chapter 9. Gluck                      |
| 4  | 9/11, 9/13, 9/15| • Pre-Frontal Cortex & WM  
• Long-Term Memory Systems  
• Amnesia                           | Chapter 9. Gluck  
Chapter 2. Weisberg  
Chapter 4. Eichenbaum + Videos      |
| 5  | 9/18, 9/20, 9/22| • Encoding & Retrieval: Top-down vs. Bottom up  
• Encoding & Retrieval: Coordination  
• Review, if time permits           | Chapter 3. Weisberg               |
| 6  | 9/25      | IN-CLASS EXAM #1 – BRING PHOTO ID and #2 PENCIL  
**Includes materials covered from 8/23 – 9/22** | Chapter 2. Gluck (excerpts) + Videos  
Chapter 4. Weisberg                |
| 6  | 9/27, 9/29| • Practical Aspects of Memory  
• Cellular Basis of Learning & Memory / Long-Term Potentiation | Chapter 2. Gluck (excerpts) + Videos  
Chapter 4. Weisberg                |
| 7  | 10/2, 10/4, 10/6| • Autobiographical Memory  
• Theories of Forgetting  
• Reconstructive Memory          | Baumeister & Bushman, 2008; Nevid et al, 2014; Loftus, 2003 |
| 8  | 10/9, 10/11| • Eyewitness Testimony  
• Learning & Memory across the Lifespan       | Chapter 12. Gluck               |
| 10/13 |            | AUTUMN BREAK – NO CLASS                                         |                                       |
| 9  | 10/16, 10/18, 10/20| • Gender & Genetic Influences on Memory & Alzheimer’s Disease  
• Imagery – History and Functions  
• Imagery & Thought                | Chapter 12. Gluck  
Chapter 7. Weisberg               |
| 10 | 10/23, 10/25, 10/27| • Visual & Auditory Imagery  
• Brain Activity During Imagery  
• Review, if time permits          | Chapter 7. Weisberg               |
| 11 | 10/30     | IN-CLASS EXAM #2 – BRING PHOTO ID and #2 PENCIL  
**Includes materials covered from 9/27 through 10/27** | Chapter 7. Weisberg               |
<table>
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<th>Wk</th>
<th>Dates</th>
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</table>
| 11 | 11/1, 11/3     | • Concept Formation  
• Essentialism & Concept Development | Chapter 8. Weisberg                                                            |
| 12 | 11/6, 11/8     | • Structure of Knowledge  
Chapter 11. Weisberg + Videos |
| 12 | 11/10          | Veterans Day – No Class                                                 |                                                                                  |
| 13 | 11/13, 11/15, 11/17 | • Heuristics and Biases  
• Deductive Reasoning and Irrationality; The Paradox of Choice  
• What is a “Problem”? Weak vs. Strong Problem Solving | Chapter 11. Weisberg + Videos  
Chapter 12. Weisberg |
| 14 | 11/20          | • Analogy & Insight in Problem Solving                                  | Chapter 12. Weisberg                                                            |
|     | 11/22, 11/24   | Thanksgiving Break – No Class                                           |                                                                                  |
| 15 | 11/27, 11/29, 12/1 | • Expertise & Problem Solving  
• Case Studies in Creativity  
• Creativity as Problem Solving vs. Special Process | Chapter 13. Weisberg  
Chapter 5. Csikszentmihalyi (1996) or Video |
| 16 | 12/4           | IN-CLASS EXAM #3 – BRING PHOTO ID and #2 PENCIL  
**Includes materials covered from 11/1 through 12/1** |                                                                                  |
| 12/6 |              | Course Finale, Final Review                                            |                                                                                  |
| 12/8 |              | NOTE UNUSUAL DATE & TIME: 8:00PM, Sullivant Hall 0220 (To be confirmed)  
**Cumulative: Covers all material from 8/23 through 12/6** |                                                                                  |

**Additional Readings (Required)**

The class will use primarily Weisberg and Reeves (2013), which will be supplemented by other readings. All additional readings will be available on Carmen in PDF format in the Additional Readings (Required) section of the Content area. The list of readings is subject to change depending on our rate of progress through the material, interest in other topics, and/or scheduling constraints.


