

## **Capstone: Advanced General**

PSY 492 - Fall 2021

Prof. Katie Corker

E-mail: [corkerka@gvsu.edu](mailto:corkerka@gvsu.edu)

Section 04, T/Th 10:00-11:15 am, Lake Superior Hall 136

Office Hours: T/Th 11:30a-12:45p, Online Monday 2:30p-3:00p

Appointments during Office Hours:

<https://katiecorker.youcanbook.me/>

Appointments at other times (email to request)

Meet me on Zoom: <https://is.gd/katiecorker>

Office Location: 2128 Au Sable Hall

Office Phone: (616) 331-2932 (but email is recommended)

### **I. Course Overview**

How do psychologists determine what is true and what is false about human behavior, affect, and cognition? The question encompasses more than we can know from a single study or even a single research paper, and the issues run deeper than just research methods. Instead, we need to consider what it means to conduct and understand science. We must consider why scientists, as humans themselves, can fall prey to biases and fallacies that interfere with their ability to draw sound conclusions.

This course focuses on an emerging field known as *meta-science* (i.e., the study of the process of science itself) in the context of research in psychology. We begin by considering whether and if the research practices of psychologists need to change. We touch briefly on philosophy of science and epistemology before attempting to determine how psychologists form cumulative knowledge and theories. We examine meta-analysis and its criticisms, drawing on several prominent historical and recent cases. Student pairs will lead discussion on reviews of diverse research.

Capstone serves as a bookend for the psychology major. We examine the field of psychology in a broad, integrative way using a seminar format. A seminar means that this course primarily involves close reading, reflective writing, and thoughtful discussion. With almost no lecture in this

course, students should expect to read and write a lot.

## II. About Your Instructor

- A. Contacting me.** The best way to contact me is via e-mail. I typically check e-mail throughout the day, but only during normal business hours (9 am - 5 pm). If you send me an email in the evening, you should not expect to get a response until the next business day. I will do my best to respond within 24 hours.
- B. Office hours.** Office hours are listed above, but I am available to meet with you during other times, if you make an appointment with me by e-mail.
- C. My expertise.** I was trained as a personality and social psychologist with a specialization in quantitative methods. I earned a Ph.D. and a master's degree from Michigan State University and a bachelor of arts from the University of Northern Iowa. I have conducted research in the areas of motivation, goal setting, academic achievement, and the role of personality in influencing all of these variables.

## III. Required Reading

**Required Text:** Chambers, C. (2017). *The 7 deadly sins of psychology: A manifesto for reforming the culture of scientific practice*. Princeton, NJ: Princeton University Press.

**Required Readings:** Additional required readings are linked in schedule below. Some readings are obtainable from the GVSU library (consult the references at the end of this syllabus).

## IV. Learning Objectives

[From the syllabus of record] Upon completion of this course, students will be able to:

- (1) Identify concepts associated with major theoretical perspectives and empirical findings in the discipline
- (2) Apply major theoretical perspectives and empirical findings in the discipline.
- (3) Describe alternative theoretical perspectives within the discipline
- (4) Synthesize where possible, alternative theoretical perspectives

- within the discipline
- (5) Recognize various sources of bias in psychological research, and how these can affect the interpretation or usefulness of research findings
  - (6) Analyze interdisciplinary approaches to psychological questions
  - (7) Explain interdisciplinary approaches to psychological questions
  - (8) Recognize an appropriate level of professional-style writing
  - (9) Produce an appropriate level of professional-style writing

This course is designed to help students develop their skills in the following areas:

**A. Critical thinking.** In this course, I will ask you to read deeply and critically engage with the readings. You will develop your critical faculties through course writings and discussion. You should expect to feel challenged and uncomfortable.

**B. Oral communication and civil discourse.** You will learn how to clearly, concisely, and respectfully express your opinion and support your position with evidence. You will be expected to engage and disagree with your peers and with me.

**C. Written communication.** You will learn how to analyze a text in writing and to communicate your opinion (supported with evidence) in writing. This course uses APA style. I will work to help you develop your unique voice and to communicate clearly with correct grammar and syntax.

**D. Quantitative reasoning.** You will learn how to critique research cumulatively. That is, rather than focusing on the flaws of a particular study, this course will show you why we need to be critical of bodies of research in science. We emphasize understanding of the quantitative reasons behind strengths and weaknesses in psychological research with an emphasis on understanding statistical power.

It is the instructor's goal that students become proficient in each of these key areas. Evaluations are designed to assess the extent to which proficiency in these areas has been attained.

## V. Evaluation

1. **Attendance.** Due to the seminar format of the course, attendance is required. Each student is allowed **two** excused absences that do not need to be made up. However, given the current circumstances, some students may need temporary accommodations to allow additional absences. Please contact me at your earliest convenience if you anticipate needing to miss multiple classes due to illness, injury, or other circumstances. Replacing in-class discussions with additional written reflections will be our go-to accommodation for students who need to miss multiple classes. Students will need to work individually with me to arrange this alternative. If at any time more than 25% of the class needs temporary accommodations, we will switch to meeting synchronously on zoom until such time as the number drops below 25%.

a. **Masks:** It is expected that students will follow GVSU policy on wearing masks during class. Please ensure that your mask is correctly secured over your nose and mouth. Please, no food or drink in the classroom when masks are required. Students not following masking rules will be asked to leave class.

b. **Symptomatic illness or COVID exposure:** Please do not come to class if you are ill or have a known exposure to someone with COVID. Instead, follow the class procedures for an absence.

c. **Class modality:** This is an in-person course. It is not possible for me to offer this entire course remotely to some of you, while continuing to teach in person to the remaining students. If circumstances conspire to make it impossible for you to attend in person at all, we will consider a variety of options including (a) dropping the course with a "W" (withdrawal), which does not affect your GPA and lets you take the course at another time when you are able, (b) remote completion (my ability to offer this option will depend on how much of the course has been completed, as well as what percentage of the class requires this support), and (c) grade of incomplete (granted only at the end of

the semester to students who are unable to complete the course, due to unexpected emergency circumstances, and who are near to completion of the course).

- 2. Participation.** Participation includes, but is much more than, merely attending class. Students should arrive on time and prepared for discussion. Being prepared means bringing the following with you:
- a. A physical (preferred) or digital (allowed, but not preferred) copy of the reading (which you've read, of course)
  - b. A copy of your notes and reflections on the reading (you can mark up the reading itself or take notes separately), including your discussion questions
  - c. Means to take notes (likely, pen and paper)

Participation will be graded holistically taking into account the frequency and quality of your contributions to class discussions, as well as your apparent level of preparedness and engagement. Students will receive midterm feedback on their participation up to that point.

- 3. Discussion questions.** Prior to each class discussion, students will submit a discussion question on Blackboard by noon the day before class. Posts are scored on the following scale: check, check minus, or missing. There are no late submissions, but we do drop the lowest two DQ scores.

Discussion questions should not merely restate or summarize what was said in the reading, but should seek to delve deeper into the material, generating interesting discussion. Thoughtful questions are usually at least 3-4 sentences and include enough context for the reader to understand the question. Students should think about the kind of discussion their questions are likely to generate as they write. Here are some examples of good question stems (from the Stanford Center for Teaching and Learning):

Type	Questions beginning with:
Analysis	"Why..." "How would you explain..."

	"What is the importance of..." "What is the meaning of"
Compare and Contrast	"Compare..." "Contrast..." "What is the difference between..." "What is the similarity between..."
Cause and Effect	"What are the causes/ results of..." "What connection is there between..."
Clarification	"What is meant by..." "Explain how..."

**4. Thought papers.** Six times throughout the semester you will prepare thought papers that react to, reflect on, and critically analyze the course readings. Responses should be minimally two double spaced pages and must be submitted on Blackboard by 10 pm the day before a discussion (see below for late policies). You may choose the readings you write thought papers on, with the following restrictions:

- a. At least one paper must be submitted in the first unit (by 10 pm on 9/16)
- b. At least three papers (in total) must be submitted by the end of the second unit (by 10 pm on 10/21)
- c. No more than one paper may be submitted in the last unit (begins on 11/18)
- d. No more than one paper may be submitted per week

Papers will be marked holistically on scale from check plus, check, check minus, and missing (zero). Begin early to ensure that you have sufficient time to complete your reflections. Here are some additional questions you might consider as you prepare your thought papers:

- What are the points the authors are trying to make?
- What is the evidence that is presented?
- Are the arguments sound?
- What are the implications of the arguments/findings? What are the authors' underlying assumptions?
- What are your reactions to what you are reading?
- Does the reading raise questions for you? If so, how would you respond to them?
- Are there interesting connections between this reading and past readings?
- Are there inconsistencies across readings? If so, how might you

- explain them?
- If readings suggest, or cause you to entertain, particular hypotheses, can you think of studies that might be designed to test them?

Thought papers may use any of the prompts above (or just your own ideas) as the basis for the paper, but the thought paper should communicate one main idea (its thesis) and support that idea with evidence (quotes from the original source, from other readings in the course, from ideas in other courses). Strict adherence to APA style doesn't matter, but clarity and grammatical correctness do.

- 5. Leading discussion.** Each student, either individually or in a pair, will facilitate discussion on a review article of their choosing. I will give recommendations for students to select articles. Articles should be current (no more than three years old) and must be submitted to me for approval. Students are encouraged to creatively facilitate discussion of their reading in any way they see fit. The entire class will read your chosen article and prepare discussion questions, but it is up to you how you run class. When you facilitate discussion, you will likely want to read beyond the chosen reading to supplement your knowledge. Scoring criteria will be available on Blackboard.
- 6. In-class writing.** Sporadically throughout the semester, I will assess your level of preparation for discussion by asking to you to respond to a question or two about that day's reading in writing. These assessments will take place at the beginning of class at my discretion. Late arrivers do not receive extra time. Students who need temporary absence accommodation will receive an alternative assignment. We do drop the lowest score from this category.
- 7. Exam.** There will be only one exam in the course (the final exam). This exam will be in essay form and will ask you to draw on multiple readings and concepts from throughout the semester and integrate them. You are advised to keep track of your readings and notes on your readings throughout the semester to prepare for the final exam.

- 8. Extra credit.** Students may complete additional thought papers for extra credit, worth up to 5 points each. Extra thought papers must be turned in by the regular thought paper deadline (10 pm the night before a discussion) and are only allowed after the required thought papers are complete. Students may earn no more than 20 points of extra credit through any combination of extra credit possibilities. All extra credit is due, via Blackboard, no later than 10 pm on 12/8/21.
- 9. Grace day policy for late work.** Unless otherwise noted above, the late policy for written work is as follows. Work may be submitted early, via Blackboard, for any assignment. Each student is allotted up to **3 grace days**, to be used discretionally, throughout the term. Each 24 hour period an assignment is late counts as one grace day. **Work that is submitted late and beyond the allotment of grace days receives a two full letter grade (20%) deduction (e.g., a paper that earns an 80% is worth a 60% if 0-24 hours late; a paper that earns an 80% is worth a 40% if 24-48 hours late).** Furthermore, no work may be submitted after the official close of the semester without an approved course extension. (Such extensions are granted in only the most extreme, and documented, circumstances.) Students with an emergency, a chronic illness, or an injury must arrange alternate work schedules with the instructor. The grace day policy is meant to cover the majority extension requests.
- 10. Point breakdown by category.**

ASSIGNMENT	POINTS	% OF TOTAL
Participation	100	20%
Discussion questions	50	10%
Thought papers (5 x 30)	150	30%
Facilitating discussion	50	10%
In-class writing	50	10%
Final Exam	100	20%
Extra Credit	Up to 20 pts	4%



## VI. Grading Scale

GRADE	POINTS	PERCENT
A	463-500	93%-100%
A-	448-462	90%-92%
B+	433-447	87%-89%
B	413-432	83%-86%
B-	398-412	80%-82%
C+	383-397	77%-79%
C	363-382	73%-76%
C-	348-362	70%-72%
D+	333-347	67%-69%
D	313-332	63%-66%
D-	298-312	60%-62%
F	<297	<60%

**THESE ARE FIRM CUT-OFFS.** I round up to the nearest percent (e.g., 86.5% rounds up to 87% and equals a B+, but 86.4% rounds down to 86% and equals a B). The point categories listed above reflect this rounding. DO NOT attempt to negotiate grades with me. It is your responsibility to make sure your grade ends up where you want it to be. I have provided ample extra credit opportunities for students who wish to improve their grades. Students who want to improve their *learning* (and therefore their grades) should see me *early* in the class for assistance. I will *not* negotiate grades with you, but I will do everything in my power to help you put in the necessary work to be as successful as you desire.

## VII. Disability Accommodation

Any student in this class who has special needs because of a learning, physical, or other disability, please contact me and Disability Support Services (DSS) at (616) 331-2490. Furthermore, if you have a disability and think you will need assistance evacuating this classroom and/or building in an emergency, please make me aware so that the university and I can develop a plan to assist you. It is the student's responsibility to request assistance from DSS.

## VIII. Academic Honesty

**Unless otherwise noted, all work for this course should be independently completed. Students should take special care to**

provide proper citation of sources when submitting written work. Adopting words, passages, or ideas without citation is plagiarism and will be treated as such per GVSU guidelines. Furthermore, students should not self-plagiarize, that is, reuse their own work from another course. The penalties for academic dishonesty range from zero on that assignment to failure in the course.

**A note about collaboration:** Collaborative work is sometimes allowed in this course. Collaborative work means sharing ideas with your peers. Collaboration does not mean giving completed work to your peers to use.

For additional details on academic honesty, please see the [student code](#).

## **IX. Our Social Contract**

In order for this course to function optimally, we both have parts to play, and when we each do our part, everyone benefits.

As professor, I promise to always do my very best to select interesting and thought-provoking course material. I will prepare course materials to the best of my abilities, and I will make decisions about the course according to the learning goals I have outlined here. I will act fairly - holding every student to the same high standard and providing equal opportunities for success.

As student, you promise to prepare diligently for class, to always contribute to the best of your abilities, to never cheat or act dishonestly, and to treat your classmates and me with the highest respect. You will do your best to attend class and be on time. You will not ask me to grant you special privileges that aren't available to the rest of your classmates, in order that I may adhere to my promise to be fair and just to all of you.

## **X. Summary of Due Dates**

- Discussion questions: Noon the day before a discussion (no late DQs; drop the lowest two)
- Thought papers: 10 pm the night before a discussion
- Extra credit thought papers: 10 pm the night before a discussion (only allowed after first six submissions)

## XI. Course Calendar

Wk.	Date	Topic	Reading/Homework/Due
<i>Houston: We have a problem</i>			
1	8/31	Intro & Syllabus	<a href="#">Stephen Colbert, "Time Traveling Porn"</a>  <a href="#">Carey, 2011</a>
	9/2	Do we have a problem?	Open Science Collaboration, 2015  <a href="#">The Experiment Experiment</a>
2	9/7	We have a problem, pt. 1	Chambers Ch. 1 & 2 (p. 1-45)
	9/9	We have a problem, pt. 2	Chambers Ch. 3 & 4 (p. 46-95)
3	9/14	Is psychology a science?, pt. 1	Dienes, Ch. 1
	9/16	Is psychology a science?, pt. 2	<a href="#">Feynman, 1974</a> Merton, 1942
<i>Towards a cumulative psychological science</i>			
4	9/21	Is psychology cumulative?	Meehl, 1990
	9/23	History of systematic review What is meta-analysis, and what can it do?	Bastian, Glasziou, & Chalmers, 2010  Chan & Arvey, 2012
5	9/28	Psychology's first meta-analysis <b>Picking Topics</b>	Smith & Glass, 1977
	9/30	Responses to Smith & Glass and meta-analysis critiques	Eysenck, 1978 Smith & Glass, 1978 Borenstein, Ch. 43
6	10/5	Case Study: Ego Depletion	Baumeister, Bratslavsky, Muraven, and Tice (1998)
	10/7	Ego Depletion Meta #1	Hagger et al. (2010)  <b>Due:</b> Topic Choices for Student Led Discussions
7	10/12	Ego Depletion Meta #2	Carter & McCullough

			(2014)
	10/14	Is meta-analysis useful?	Ioannidis (2017); Ferguson (2016); <a href="#">Engber, 2016</a>
8	10/19	Psychology vs. Biomedicine: COMPare Trials Results	<a href="#">Goldacre, Drysdale, Dale...2019</a>
	10/21	Researcher Motivations & Incentives	Chambers Ch. 5-7
<i>Fall Break</i>			
<i>Evaluating the evidence: Current examples</i>			
9	10/28	Student Led Discussions	Pair 1 Pair 2
10	11/2	Student Led Discussions	Pair 3 Pair 4
	11/4	Student Led Discussions	Pair 5 Pair 6
11	11/9	Student Led Discussions	Pair 7 Pair 8
	11/11	Catch up	Flex Day
12	11/16	Student Led Discussions	Pair 9 Pair 10
	11/18	p-curve (Demonstration with Bem, 2011)	Simonsohn, Nelson, & Simmons, 2014
<i>Dissecting the past and looking forward</i>			
13	11/23	Adjudicating the evidence	<a href="#">Cuddy (2012)</a> Simmons & Simonsohn (2017) Cuddy et al., 2018
<i>Thanksgiving Break</i>			
14	11/30	Case Study: Should instructors ban laptops?	<a href="#">Dynarski (2017)</a> ; Urry et al., 2021
	12/2	Case Study: Empirically Supported Therapies	<a href="#">Sakaluk, Williams, et al. (in press)</a>
15	12/7	Things are looking up	Chambers Ch. 8 <a href="#">Vazire, 2016</a>
	12/9	The Psychological Science Accelerator Where do we go from here?	Moshontz et al. (2018)
15	12/16	Final Exam, 10 am	

**References:**

- Colbert, S. (2011, January 27). Time traveling porn. *The Colbert Report* [video clip]. Retrieved from <http://www.cc.com/video-clips/bhf8jv/the-colbert-report-time-traveling-porn---daryl-bem>
- Carey, B. (2011, January 6). Journal's paper on ESP expected to prompt outrage. *The New York Times*. Retrieved from <http://www.nytimes.com/2011/01/06/science/06esp.html>
- Open Science Collaboration. (2015). Estimating the reproducibility of psychological science. *Science*, 349(6251), aac4716.
- Kestenbaum, D. (2016, January 15). The experiment experiment [audio podcast]. *NPR Planet Money*. Retrieved from <https://www.npr.org/sections/money/2016/01/15/463237871/episode-677-the-experiment-experiment>
- Chambers, C. (2017). *The 7 deadly sins of psychology: A manifesto for reforming the culture of scientific practice*. Princeton, NJ: Princeton University Press.
- Dienes, Z. (2008). Karl Popper and demarcation. In *Understanding psychology as a science* (pp. 1-32). London: Palgrave Macmillan.
- Feynman, R. P. (1974). Cargo cult science. *Engineering and Science*, 37(7), 10-13.
- Merton, R. K. (1942). A note on science and democracy. *Journal of Legal & Political Sociology*, 1, 115-126.
- Meehl, P. E. (1990). Why summaries of research on psychological theories are often uninterpretable. *Psychological Reports*, 66(1), 195-244.
- Bastian, H., Glasziou, P., & Chalmers, I. (2010). Seventy-five trials and eleven systematic reviews a day: How will we ever keep up? *PLoS medicine*, 7(9), e1000326.
- Chan, M. E., & Arvey, R. D. (2012). Meta-analysis and the development of knowledge. *Perspectives on Psychological Science*, 7(1), 79-92.

- Smith, M. L., & Glass, G. V. (1977). Meta-analysis of psychotherapy outcome studies. *American Psychologist*, 32(9), 752-760.
- Eysenck, H. J. (1978). An exercise in mega-silliness. *American Psychologist*, 33(5), 517.
- Glass, G. V., & Smith, M. L. (1978). Reply to Eysenck. *American Psychologist*, 33(5), 517-519.
- Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). Criticisms of meta-analysis. In *Introduction to meta-analysis* (pp. 377-387). Chichester, UK: John Wiley & Sons, Ltd.
- Baumeister, R. F., Bratslavsky, E., Muraven, M., & Tice, D. M. (1998). Ego depletion: Is the active self a limited resource?. *Journal of Personality and Social Psychology*, 74(5), 1252-1265.
- Hagger, M. S., Wood, C., Stiff, C., & Chatzisarantis, N. L. (2010). Ego depletion and the strength model of self-control: a meta-analysis. *Psychological Bulletin*, 136(4), 495-525.
- Carter, E. C., & McCullough, M. E. (2014). Publication bias and the limited strength model of self-control: Has the evidence for ego depletion been overestimated?. *Frontiers in Psychology*, 5, 1-11.
- Goldacre, B., Drysdale, H., Dale, A., Milosevic, I., Slade, E., Hartley, P., ... & Mahtani, K. R. (2019). COMPare: A prospective cohort study correcting and monitoring 58 misreported trials in real time. *Trials*, 20(1), 118. <https://trialsjournal.biomedcentral.com/track/pdf/10.1186/s13063-019-3173-2>
- Ioannidis, J.P.A. (2017). Meta-analyses can be credible and useful: A new standard. *JAMA Psychiatry*, 74(4), 311-312.
- Ferguson, C. J. (2014). Comment: Why meta-analyses rarely resolve ideological debates. *Emotion Review*, 6(3), 251-252.

- Engber, D. (2016, March 6). Everything is crumbling. *Slate*. Retrieved from [http://www.slate.com/articles/health\\_and\\_science/cover\\_story/2016/03/ego\\_depletion\\_an\\_influential\\_theory\\_in\\_psychology\\_may\\_have\\_just\\_been\\_debunked.html](http://www.slate.com/articles/health_and_science/cover_story/2016/03/ego_depletion_an_influential_theory_in_psychology_may_have_just_been_debunked.html)
- Simonsohn, U., Nelson, L. D., & Simmons, J. P. (2014). P-curve: a key to the file-drawer. *Journal of Experimental Psychology: General*, 143(2), 534-547.
- Cuddy, A. (2012). Your body language may shape who you are [video file]. Retrieved from [https://www.ted.com/talks/amy\\_cuddy\\_your\\_body\\_language\\_shapes\\_who\\_you\\_are/up-next](https://www.ted.com/talks/amy_cuddy_your_body_language_shapes_who_you_are/up-next)
- Simmons, J. P., & Simonsohn, U. (2017). Power posing: P-curving the evidence. *Psychological Science*, 28(5), 687-693.
- Cuddy, A., Schultz, J., & Fosse, N. E. (2018). P-curving a more comprehensive body of research on postural feedback reveals clear evidential value for 'power posing' effects: Reply to Simmons and Simonsohn. *Psychological Science*, 29, 656-666. Preprint: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3054952](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3054952)
- Dynarski, S. (2017). Laptops are great, but not during a lecture or a meeting. *New York Times*. Retrieved from <https://mobile.nytimes.com/2017/11/22/business/laptops-not-during-lecture-or-meeting.html>
- Urry, H. L., Crittelle, C. S., Floerke, V. A., Leonard, M. Z., Perry, C. S., Akdilek, N., Albert, E. R., Block, A. J., Bollinger, C. A., Bowers, E. M., Brody, R. S., Burk, K. C., Burnstein, A., Chan, A. K., Chan, P. C., Chang, L. J., Chen, E., Chiarawongse, C. P., Chin, G., ... Zarrow, J. E. (2021). Don't Ditch the Laptop Just Yet: A Direct Replication of Mueller and Oppenheimer's (2014) Study 1 Plus Mini Meta-Analyses Across Similar Studies. *Psychological Science*, 32(3), 326-339. <https://doi.org/10.1177/0956797620965541>
- Sakaluk, J. K., Williams, A. J., Kilshaw, R. E., & Rhyner, K. T. (in press). Evaluating the evidential value of empirically supported psychological treatments (ESTs): A

meta-scientific review. *Journal of Abnormal Psychology*.  
Retrieved from <https://psyarxiv.com/pzbhw/> doi:  
<https://doi.org/10.1037/abn0000421>

Vazire, S. (2016, February). It's the end of the world as we know it...and I feel fine [blog post]. Retrieved from <https://sometimesinwrong.typepad.com/wrong/2016/02/end-of-the-world.html>

Moshontz, H., Campbell, L., Ebersole, C. R., IJzerman, H., Urry, H. L., ... & Chartier, C. R. (2018). The Psychological Science Accelerator: Advancing psychology through a distributed collaborative network. *Advances in Methods and Practices in Psychological Science*, 1, 501-515. [Preprint at <https://psyarxiv.com/785qu/>]