Sensation & Perception
PSY 522, Spring 2018, CRN#37012

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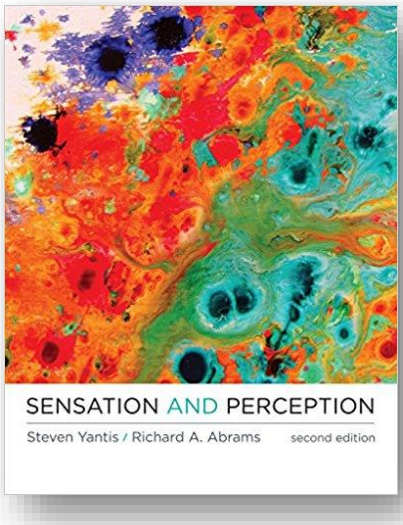
Please review this syllabus and Canvas before you send an email! Most of your questions can be answered using this document.

COURSE MATERIALS:

1) Textbook (required): "Sensation and Perception" (2nd Edition) by Steven Yantis and Richard A. Abrams. This book can be purchased in hardcover (ISBN: 978-1464111709) or loose-leaf (ISBN: 978-1-4641-5661-8), or e-Book, or can be rented. The choice is yours, but please note that exams are open book. If you choose to have an electronic version of the text and are unable to access it during the exam (due to internet connection issues, computer problems, or any other reason), you will have to take the exam without the book. I cannot be responsible for technical problems preventing you from accessing the material, so you may want to consider a physical copy of the book. I have extensively researched S&P texts and this is definitely one of the best, particularly at this price-point (considering quality of the text and online materials). I apologize that it's rather expensive, but for those of you genuinely interested in S&P, it should serve as an excellent resource for you for years to come.



2) Canvas: Everything you need to know about this course can be found on Canvas at https://learn.nmsu.edu. This includes the syllabus, grades, rubrics, and all other course material. I will also post announcements occasionally. Content on the Canvas site will be updated constantly as we progress through the course. It is your responsibility to check Canvas on a regular basis! That means once per day (preferably in the morning, especially on days when you have class).

COURSE GOALS/OBJECTIVES/FORMAT:

This course is intended to provide you with an introduction to the physiology, psychology, and neuroscience behind our ability to sense and perceive our environment, as well as the research methods

employed in studying these topics. This is a graduate course – though some gifted undergraduates have been allowed special access to the course – so I will not be treating you all in any way like undergraduates. I will treat you all as advanced graduate students, capable of learning on your own (and in your own way), capable of conducting scientific research, and capable of producing high quality writing that is suitable for publication. Indeed, a primary goal of this course is to work with you on some challenging and fun projects that will hopefully produce tangible products for you as individuals and/or as groups. My goal is to have you all produce publication-quality materials related to the field of S&P, and to have you formally submit them for publication after the semester comes to a close.

The text for this course is essential for you to learn the background material necessary. No amount of reading freely-available research articles can substitute for the basic knowledge provided by the text, nor the many active demonstrations provided in the online supplementary material. That being said, I will NOT be lecturing to you in this course. You are all advanced students, capable of reading the material on your own. You will be responsible for all the material in the book, and you will take short exams on each chapter, but they will all be open-book. There is no point forcing you to memorize this material; it is more important that you familiarize yourself with it, and be able to look up appropriate information when called upon to do so.

Instead of a lecture-memorize-regurgitate style class, this will be a highly interactive course. Over the course of the semester, you will work on a pair of quite intense writing assignments in a "scaffolded" fashion. This means you'll submit pieces of the assignments to me over the semester, and will routinely receive detailed feedback on how to hone and perfect your writing. Some of this may be done individually, and some will be in groups. Though one of the writing assignments is an APA-style research paper, the other will be far more fun (i.e., an article targeted at publication in *Frontiers for Young Minds*). The other component of this course will involve conducting a full-scale research project (conducted using your classmates as research participants), with the aim of replicating yourselves (after going through IRB approval, of course) in following semesters with a larger population, and eventual publication in a short-report journal such as *Psychological Science; Attention, Perception &Psychophysics; Perception;* or other appropriate outlets. I have set aside plenty of time to work on the various projects in class, and have several opportunities for you to present your projects to the class, such that all of your peers can provide you with helpful and constructive feedback.

My overall goals in this course are: 1) to provide you with basic exposure to the material needed to understand sensation and perception; 2) to challenge you to produce high quality writing, including in mediums you may be unfamiliar with; 3) to challenge you to conduct serious, novel research in the field of S&P; and 4) to help you create tangible products by the end of the semester that result in formal publication for many (hopefully all!) of you. This course likely will not be easy, but will hopefully be fun and productive for all of you.

GRADING (AND RELATED) POLICIES:

Exams: Your grade in this course will be based in part on exams for each of the 15 chapters from the book, worth a total of 40% of your grade. The exam for each chapter will consist of 20 multiple-choice

questions; I will provide bubble-sheets. At three points during the semester, you will take an exam on three chapters at once. Then, during the scheduled final exam time, you will take an exam on each of the remaining six chapters. The order in which you take the exams will be entirely up to you! You can choose to learn the material in whatever order you want, dictated in part by your research interests, and the topics on which you choose to do your various projects. You will simply need to let me know one week prior to the exam what chapters you wish to take, and I will have them ready for you on the exam day. All exams will be open-book format, but will be taken as individuals. And for those of you using electronic versions of the text, please take all steps necessary to ensure working technology on exam days. I will not be responsible for failed internet connections, malfunctioning computers, and so on.

If for any reason you cannot attend class the day of an exam, you must contact me at least 24 hours before class to schedule a make-up exam. Make-up exams must be taken within one week of the original exam date. Failure to inform me 24 hours in advance or failure to take the exam within one week of the scheduled date will result in a grade of zero. This is non-negotiable.

***Frontiers for Young Minds* article:** The second component of this course will be to write an article intended for publication at the journal *Frontiers for Young Minds*. This is a non-profit scientific journal that publishes articles written by scientists but reviewed by both scientists and a board of kids. Unlike the other *Frontiers* outlets, publishing in this outlet is free of charge. So my hopes are that you will create work actually worthy of publication by the end of the semester; I will assist you every step of the way. You can choose to work on this project alone or in groups of up to three. If you elect to work in a group, each of you will receive the same grade on each portion of the assignment. You will find full details on this assignment below, including due dates and the "scaffolding" writing process. This assignment will be worth a total of 20% of your grade.

Research project and APA-style paper: The final component of this course will involve conducting novel scientific research in the realm of sensation and perception (and/or cognition). Your task will be to design, propose, fine-tune, and implement a full-scale research project over the course of the semester. Because acquiring IRB approval is a lengthy procedure, you will simply use your classmates (and/or friends) as your volunteer research participants. You will analyze your data, and prepare both a full APA-style report and final presentation for the class. If all goes well, you will take what you have done and implement it fully (and properly) in forthcoming semesters in an effort to replicate yourself and publish your work in a peer-reviewed journal outlet (grades are not contingent on this, however). All details can be found below. This project will be worth a total of 40% of your grade.

***FRONTIERS FOR YOUNG MINDS* ARTICLE DETAILS**

Article topic approval: The topic you choose for your article is going to be almost entirely open. You can choose to discuss a particular perceptual phenomenon or illusion, an area of the brain, a particular type of neuroimaging, an open or unanswered question in psychology or neuroscience, more general issues in

understanding brain science, and so on. I want this to be fun, so I will leave this open to you to pick a fun and interesting topic, something you can get excited and passionate about.

For instance, you may choose to write an article about a particular perceptual illusion, or a class of illusions. Your article could center not just on a demonstration of this illusion, but why it matters, what it tells us about the functioning of the brain, and how it relates to real-world behaviors. Simple examples might include a discussion of the "Ames room" and its application to filming perspective in the *Lord of the Rings* movies, motion after-effects and how they relate to driving behavior, color perception and how color and angular perspectives are used by artists, perceptual predictions as relates to professional baseball players trying to hit a pitch, and so on.

The topics will be of your choosing. That being said, I do need to make sure that these topics are relevant to the course. You can see from the calendar that you must have approval for your topic by February 23rd. You will receive 2% of your overall grade (all or none) by discussing your topic with me via email by the due date. Keep in mind, I may ask you to revise your topic, or to change it altogether. So it is in your best interest to discuss ideas with me well before the due date to allow adequate time for adjustments.

You will also need to present your idea to the class on February 27th or March 1st. You will prepare a few slides (3ish Powerpoint slides) presenting your topic, why you think it's important and interesting for kids, and outlining the general approach you plan to take. This will be presented to the class, after which the class as a whole will provide feedback and ideas to assist you in developing your article.

To help you get ideas for the sort of approach I'm hoping for, you can find several resources below. The journal's mission statement is: "*We seek to connect curious minds to the experts and information that will motivate them to ask informed and critical questions about real science throughout their lives. By working directly with scientists, we ensure that our content is of the highest quality. By working directly with kids, we help foster curiosity both in and out of the classroom and engage the next generation of citizens and scientists.*"

The type of article you should aim to write is a "Core Concept" article. Here is the description:

> *"Core Concept articles explain fundamental ideas from a given field and synthesize them in language that can be understood by kids (ages 8-15). Each article should have a clear scope and not attempt to address an entire discipline. The article should be primarily self-contained, explaining major terms within the text and clearly identifying areas where people could be interested to find out more.*
>
> *Too broad: "Earth Science," "The Heart," "Renewable Energy," or "The Brain". Clear scope: "Types of plate margins," "Why do you have a heart beat?" "How do wind turbines create energy?" or "Why does your brain need sleep?"*
>
> *The authors of Core Concept articles should have an established expertise in the field, including a relevant publication record (see Cover Letter section, below). Articles are copy-edited, receive a DOI and are published in PDF and HTML format. Authors are not required to pay a fee to publish a Young Minds Article."*

The variant of the journal you should aim to apply to is "Understanding Neuroscience." Here is the description:

> *"So much depends on the brain. When scientists want to study how and why living creatures do what they do, the brain is one of the places that they start. The brain plays a key role in how you do the things you do, learn to do new things over time, and why there will be certain things that you will never be able to do no matter how hard you try. This section of Frontiers for Young Minds will not only include articles about the brain itself, but the way the brain changes over time, techniques we use to study the brain, how aspects of the brain relate to behavior and performance, and why the brain developed in the ways that it did. Understanding Neuroscience wants to provide a chance for the next generation to think critically about the organ that makes it possible for them to think in the first place."*

Resources:

- The journal: https://kids.frontiersin.org/
- A particularly good sample article, written about face perception and pareidolia: https://kids.frontiersin.org/article/10.3389/frym.2017.00067
- Other articles: https://kids.frontiersin.org/articles
- About the publication process: https://kids.frontiersin.org/about
- Author guidelines: https://kids.frontiersin.org/about/authorguidelines
- A how-to guide: https://kids.frontiersin.org/Documents/How_To_Write_Frontiers_For_Young_Minds_Article.pdf

As an alternative, you may choose instead to write an article aimed at an older audience, such as the type you may find in *Scientific American Mind* magazine. Because publishing in this magazine is a more difficult process than submitting to a journal, I would prefer that you write your articles for *Frontiers*, so that you have a better shot and publishing your work. But if writing "down" to children is not of interest to you, I will allow for this alternative. Please note, however, that the *Frontiers* articles are actually fairly advanced; they're simple geared towards naïve audiences, and written in such a way that would be enjoyable for people of all ages.

In case you'd like to consider the alternative option, you will find a pair of sample articles below. You should NOT necessarily try to emulate these. They are intended only to give you a sense of the style of writing I'm hoping for: non-academic, fun, interesting, and engaging. The two resources below are a pair of *Scientific American Mind* magazine articles that I wrote with my former graduate advisor, Dr. Stephen Goldinger, and my current graduate student, Ms. Arryn Robbins.

Example materials:

- https://www.dropbox.com/s/719ftqg7wxikuzc/HoutGoldinger_SciAmMind2013.pdf?dl=0
- https://www.dropbox.com/s/cs3rvukqmiszhcn/RobbinsHout_SciAmMIND2015.pdf?dl=0

Draft of thesis and intro paragraph: The most important part of writing your article is getting a solid introduction written. Many people find that the opening of any piece of writing is the most challenging, so I'm going to help you hone this portion of the article. If you can get a good intro written, the rest should flow smoothly.

First, start by writing a good title. A good title engages and informs your reader of the thesis; that is, the title motivates the reader to want to read your writing and it informs the reader as to what your essay/article is about. You can start by trying out a title that is just a summary of your topic, but as you work on the article, it should develop into something more interesting. You may want to consider a two-part title with a colon in the middle. To do this, put the question or problem to the left of the colon and then the key concepts of your thesis to the right. For example, "To see or not to see: Spotting what we are looking for seems simple, but it isn't." (Hout & Goldinger, Scientific American Mind, 2013)

The next step is to begin your introduction. The traditional introduction to one-two paragraphs long. The introduction helps you contribute to an already existing conversation in the literature. This means you must read widely about your topic *before* beginning so that you can locate your work in the existing literature. Do not choose a thesis such as "people don't really only use 10% of their brains" because that's a boring old trope, and one that no one really believes anymore. Find a thesis you can sink your teeth into; something that captures your own attention and passion, something people (particularly children!) don't already know, or something they may misunderstand. If you're passionate about the topic, it will come out in your writing.

Then, join the existing conversation, usually by correcting a misconception. Begin by sharing the widespread or commonplace view, but take care not to paint belief in that idea as something naïve or idiotic. Readers want to learn and be surprised, not be made to feel stupid or inferior to the author. Then describe what is wrong with this line or thinking (in whole or in part). Finally, communicate to the reader the proper state of the art, the correct way of thinking about this topic. This final bit is the thesis, and is traditionally the last (or near to last) sentence of your introduction.

Here's how an introductory paragraph might look (adapted from Graff & Birkenstein, 2010, pp. 26-27):

When it comes to the topic of _____, most of us believe that _____. The correct view is actually that _____. This is an important misconception to correct because _____. The evidence in favor of this idea is X, Y, and Z.

Please use this template or adapt it for your own purposes. Your introduction absolutely does NOT have to follow that format, but you may find it useful in guiding your thinking. The key thing is that there is some thesis statement in the intro. Some sentence that succinctly sums up the point you are going to try and make in your article (in the example above, the second sentence is the thesis). When you have identified and honed that sentence, underline it for me. Don't forget, you also have to add key ideas; statements that support the thesis you are trying to make (in this example, the last sentence with XYZ).

After drafting the introduction and thesis, ask yourself:

- Does the introduction grab the attention of the reader, and treat their misconception (or misunderstanding) as a reasonable (if ill-informed) view to hold?
- Is this a common misconception/misunderstanding? Alternatively, is this a topic that is poorly understood by a large swathe of people? Is this topic something a wide audience would benefit from learning about?

The draft of your title, thesis and intro paragraph are due on March 9th. In total, it should be 5-10 sentences in length. Please note, by "draft," I don't mean "shoddy, ill-conceived, half-arsed document." This should be in good shape when you send it to me. It's a draft in the sense that I will provide feedback for you to help you hone it and make it even better. Keep in mind, the more work you put into your drafts, the more points you will get, AND the less work you have to do later when you revise your work. So it's in your best interest to do a good job from the very start. This will be graded using the following rubric (below). This component of the course is worth 3% of your overall grade.

Introduction/Thesis Rubric				
Points	1	2	3	4
Hook	There is no attention getter.	There is a beginning, but it doesn't really grab the interest of the reader.	The beginning somewhat grabs the reader, and gives some clue as to what is coming.	The beginning grabs the reader, and gives clues as to what is coming.
Thesis Sentence	The sentence does not state the main idea.	The sentence somewhat states the main idea.	The sentence states the main idea, but it may be slightly unclear or disconnected to the rest of the paragraph.	The sentence clearly states the main idea and sets up the rest of the paragraph.
Key Ideas	There are no key ideas that support the main idea.	There is only one key idea, leaving the paragraph incomplete.	The key ideas are present, but not completely clear.	The key ideas are clear.

Draft of key sentences and figures: The entire article should be in the range of 1500-2000 words long. Assuming each paragraph is roughly 150-200 words long, that means your article should be around 10 paragraphs long. The easiest way to organize your article (and your thoughts!) is to create a set of key sentences (sometimes called "topic sentences"). Your article should be organized around arguments and evidence. In a short(ish) article like this, each paragraph should make one (and only one) argument.

Begin by putting closely-related ideas together. Once they are placed side by side, you can discard weak arguments and sharpen strong ones. This process of sorting and sharpening your ideas makes your prose more understandable to others. Then, check to see if every paragraph has a key or topic sentence, or a

sentence that summarizes the argument of the paragraph. This sentence should appear early in the paragraph before the evidence. Readers expect nonfiction to have one topic per paragraph, with the argument announced in a key or topic sentence.

Key sentences should have several characteristics: The key sentence should be short: It should announce the topic simply with little detail without trying to prove the point—the rest of the paragraph serves that function. A key sentence should be broad enough to "cover" everything in the paragraph but not be so broad that it raises other issues. For example, if you are talking about apples and oranges, you must mention both apples and oranges in the key sentence—and you cannot bring up bananas. The key sentence should include key words in its subject; that is, if the topic of the paragraph is "Napoleon," then "Napoleon"—and not "he"—should appear as the subject of the key sentence. Finally, the key sentence should answer this question affirmatively, "Does everything after the key sentence address the topic of the key sentence?" (Gray, 2015, p. 45).

What you're turning in for this section (on March 16th) is not the whole paragraphs, but just the key sentences. Create an after-the-fact outline by making a list of your key sentences (Gray, 2015, pp. 53-56). Place each key sentence under your thesis in a list. If the key sentences are enough to make your argument effectively, and to move the conversation along, then writing the supporting sentences (that fill in the rest of the paragraphs) should follow quite naturally. In addition to the key sentences, please create draft figures (2-3) to supplement the material in your article. This component of the course is worth 3% of your overall grade.

Key/Topic Sentences, Outline, and Figures Rubric				
Points	1	2	3	4
Key/Topic Sentences	Missing, invalid, or inappropriate topic sentences; main ideas are missing.	Acceptable topic sentences present one idea each.	Clearly stated topic sentences present one main idea each.	Interesting, original topic sentences, reflecting thought and insight; focused on one interesting main idea each.
Organization and Transitions	No discernible pattern of organization; Unrelated details; no transitions.	Acceptable arrangement of examples; transitions may be weak.	Details are arranged in a logical progression; appropriate transitions.	Thoughtful, logical progression of supporting examples; Mature transitions between ideas.
Figures	Missing, inappropriate, or uninformative figures.	Acceptable figures, but minimally informative.	Figures are appropriate and informative but lack clarity / need improvement.	Appropriate, informative, and clearly articulated figures.

Draft of article: The next thing to do (and eventually turn in, on April 4th) is self-assess what you've put together, and create a thorough draft of the entire article, making sure to include your figures and references. It is worth noting that a subsection of the rubric used to evaluate the article draft (below) is identical to that used to evaluate your key sentences. I will grade more lenient on the draft of the key sentences, and more critically here, once you've had my feedback and been given the opportunity to hone key/topic sentences and organization/transition. If you follow my feedback and work to revise your work, getting all the points on those sections here should be very very easy.

In effect, this is where you "put it all together." By this point in the course, you will have read a lot, thought about your topic, discussed material with your classmates, written a solid introduction and thesis statement, created an outline of key sentences. All that's left to do is fill in the paragraphs around your key sentences with supporting text and evidence. Creating an entire article that is this extensive is a great deal of work, but you will have built up all the components bit by bit, so completing the final steps should not be too taxing. Below, you'll find the rubric used to grade the draft of your article. This component of the course is worth 8% of your overall grade, so please take the draft seriously!

Article Rubric				
Points	1	2	3	4
Key/Topic Sentences	Missing, invalid, or inappropriate topic sentences; main ideas are missing.	Acceptable topic sentences present one idea each.	Clearly stated topic sentences present one main idea each.	Interesting, original topic sentences, reflecting thought and insight; focused on one interesting main idea each.
Supporting Details	Insufficient, vague, or undeveloped examples.	Sufficient number of examples and details that relate to the topic.	Examples and details relate to the topic and some explanation is included.	Interesting, concrete and descriptive examples and details with explanations that relate to the topic.
Organization and Transitions	No discernible pattern of organization; Unrelated details; no transitions.	Acceptable arrangement of examples; transitions may be weak.	Details are arranged in a logical progression; appropriate transitions.	Thoughtful, logical progression of supporting examples; Mature transitions between ideas.
Style	Inconsistent or inappropriate tone; Awkward,	Acceptable tone; some variety in sentence	Appropriate tone; Clear sentences with varied	Appropriate tone, distinctive voice; pleasing variety in

	unclear, or incomplete sentences; Bland diction, poor word choice.	structures; Adequate diction and word choices.	structures; Effective diction.	sentence structure; Vivid diction, precise word choices.
Mechanics	Distracting errors in usage, spelling, or punctuation.	A few errors in usage, spelling, or punctuation. (3-4)	Some errors, but none major, in usage, spelling, or punctuation. (1-2)	Consistent standard English usage, spelling, and punctuation. No errors.

Final article: Once you turn in a draft of your article, I will provide you with detailed feedback. The earlier you get the draft to me, the more chance I will be able to provide you with thorough feedback. You will then have a few days to work on the article, incorporate my feedback, and really get it cleaned up and ready for prime time. I will use the same exact rubric to evaluate your final article that I used to evaluate the draft. So if you take my feedback seriously, and perform the revisions thoroughly, there is no reason you should not get all the points possible on the final article.

This component of the course is worth 4% of your overall grade, and is due on April 24th. It's worth a little less than the draft, as you will have received feedback telling you how to acquire the full points for this component. But it's still worth a lot, so take your revisions seriously, please! If you make all the revisions I suggest (or provide good rationale as to why you think the suggestion was a bad one), there is no reason you shouldn't receive full points on this component.

RESEARCH PROJECT AND APA-STYLE PAPER DETAILS

The most challenging component of the course will be the group research projects. I will organize you into four groups of approximately equal size. I will try to pair undergraduate students with graduate students, and will try to organize the groups according to shared interests. Each group will be expected to design a novel research study. This does NOT have to be a grand or extravagant experiment. It can be a simple extension of prior research (provided there is appropriate theoretical rationale for the extension), or a new research line altogether. Because conducting strictly sensation/perception research is sometimes difficult, I will allow research projects to fall a little closer in line with cognition, as well. The idea is to design a research study that is aimed at future publication.

Because it takes time to get IRB approval for proper studies, it is unreasonable to expect everyone to have a polished study by the end of the term. Think of this as a pilot project that will inspire and inform a future, complete experiment(s). Because you are unlikely to be able to acquire IRB approval by the end of the term, you should simply conduct your study on your classmates, friends, and anyone else you can get to volunteer (including me!). I do not expect large sample sizes, but a sample N of 1 will clearly be

unacceptable. Aim for 10-15 or more people in your study, depending on the design. I have set aside two full class periods to collect data, but you may need to collect data outside of class as well.

I will make my programming expertise available to you (i.e., I will help you program in E-Prime, but will not program your experiment for you), as well as my laboratory resources if need be (e.g., banks of computers, desktop eye-tracker, mobile eye-tracker, tDCS machine, touch screen monitors, 4K monitors, blood pressure cuffs).

Research topic approval: The topic you choose for your project (like your *Frontiers* article) is going to be almost entirely open. I have set aside work days at the start of the semester so you can begin reading the book, reading research articles, and discussing topic ideas with me. Your research question must be theoretically motivated! Research questions such as "I wonder what would happen if X" are for undergraduate research methods courses and are inappropriate for students of your caliber. You must have your topic approved by me by February 2nd. This is worth 2% of your grade (graded in all-or-none fashion). Below, you'll find a list of journals with particularly good sensation, perception, and cognition research. In addition to the book, these are good resources to begin hunting down inspiration and theoretical motivation for your study.

- Journal of Experimental Psychology: Human Perception & Performance
- Attention, Perception, & Psychophysics
- Perception / i-Perception
- Psychological Science
- Journal of Experimental Psychology: Applied
- Cognition
- Acta Psychologica
- Quarterly Journal of Experimental Psychology

Research topic proposal: On February 6th and 8th, the groups (two per day) will present their proposals to the class. You will have 30 minutes to present, and should spend approximately 15-20 minutes presenting your idea, including background material, why you chose this project, your research design, and your anticipated results. The other 15-20 minutes will be spent with the class presenting questions and critiques to each group in the interest of constructive criticism and research improvement. Based on this feedback, you will hone the design and implementation of your study. Your research proposal is worth 5% of your grade, and will be graded on rubric below. Note that the rubric below will be used for the topic proposal, the revised proposal, and the final presentation. For the topic proposal, the Results should be "anticipated results," as no data will have yet been collected. And the Discussion should include discussion of the implications if the data turn out as expected.

Revised research proposal: On March 13th and 15th, the groups (again, two per day) will present their revised research proposals to the class. You will again have 30 minutes to present, and should spend approximately 15 minutes presenting your research ideas. This time, however, your presentation should focus more on what you decided to change / revise following the initial proposal. You do NOT have to go through the whole song and dance again, though basic reminders of theoretical motivation and methods are necessary. Note that following the initial proposal, you can choose to modify your design drastically,

or minimally, depending on the feedback and your discussions with me. But you must take the feedback seriously. Hard-headed "sticking to your guns" and re-presenting your initial proposal is not acceptable. This will be worth 3% of your grade.

Final presentation: The final presentation should bring the class up to speed on the outcome of your research. Because we will be past the point of needing feedback, you should spend 20-25 minutes presenting, and allow 5-10 minutes for questions. Your presentation should include all aspects of the rubric, with particular emphasis on presenting the results, discussing the implications, and discussing what you would do differently were you to replicate/advance your work in the future. These presentations will take place on May 1st and 3rd, and will be worth 10% of your grade. This is a big portion of your grade, so please take it seriously, and make sure that you put forth a well-polished presentation.

Presentation Rubric				
Points	1	2	3	4
Introduction	Poor depth of review, no references, speaker does not seem to understand study.	Inappropriate depth, literature not cited properly, vague verbal description.	Appropriate depth, but several errors in wording or organization. Verbal description unclear.	Appropriate depth of literature review (properly cited). Clearly explained.
Method	Poor or no description of method. Confusing.	Inadequate description, missing details, poor chronological explanation.	All details present, but described in a somewhat confusing way. Seems "top-downed."	Clearly and appropriately described. Very understandable.
Results	Incorrect analyses, poor description of findings (if any).	Inadequate description, missing details, inappropriate organization.	Results adequately described, but presented in a somewhat confusing manner. Poor interpretation.	Statistical tests and results described appropriately. Findings clearly articulated.
Discussion	Inadequate conclusions. Seems unrelated to study.	Confusing or difficult to follow conclusions, although they are present.	Adequate conclusions, though occassionally unclear.	Appropriate depth and well-articulated conclusions.

Research paper: At the end of the semester, you will turn in a full APA-style report on your research project. However, you will not write it all in one sitting. Instead, you will turn in pieces of the paper in "scaffolded" fashion, like with the *Frontiers* article, receiving detailed feedback from me every step of the way (which I expect to be taken seriously and incorporated into your revisions!). You should write this in

the style of a short-report journal article, on the order of 3000-4000 words (most short-reports are somewhat more brief, but I'd prefer more detail in your write-ups).

A draft (again, "draft" meaning a well-crafted version that will be revised following my feedback, not shoddy work) of your Introduction is due on March 28th, and is worth 7% of your grade. A draft of your Methods section is due on March 30th, and is worth 5% of your grade. A draft of your Results section is due on April 13th, and is worth 3% of your grade. And the final research paper (taking into consideration all my critiques and a serious process of revision) is due on the last day of class, May 3rd, and is worth 5% of your grade. Note that the final paper is worth a low amount because at that point, you'll simply need to revise accordingly and write the Discussion.

The rubrics for each section of the paper can be found below. For each sub-section, the relevant sub-section of the rubric will be used in grading, in addition to "Quality of writing" and "APA Style." For instance, for the draft of the Introduction, I will use the "Introduction" section, the "Quality of writing" section, and the "APA style" section to grade your paper. The final paper will, of course, incorporate all sections of the rubric. Provided you are making appropriate revisions to the Introduction, Method, and Results, you should easily acquire full points for those sections of the rubric.

Presentation Rubric				
Points	1	2	3	4
Introduction	Poor progression, if any. Literature is poorly related to current study and is not logical.	Adequate organization of ideas, but no narrowing. Some literature is out of place or unrelated. Transitions not apparent.	Starts broadly, ends narrowly. No more than 2 missing transitions or confusing connections of literature to present work.	Starts broadly, ends narrowly. Transitions are appropriate and literature "builds" to the current study.
Methods	No methods presented or methods presented so poorly they do not make any sense.	Methods poorly described, incorrect, or presented in inappropriate detail (missing information).	Great description of methods, but presented illogically or missing detail.	Great description of method, presented logically, with appropriate detail.
Results	No results or results presented so poorly they do not make sense. Incorrect analysis.	Analysis poorly described or not correct. Results presented in inappropriate detail. Missing information.	Appropriate analyses run, but not described in logical order. No more than 2 instances of missing or	All appropriate analyses run and described properly. No missing or inappropriate details.

			inapproriate detail.	
Discussion	Very similar to the introduction, with little information on results or new directions.	Results presented, but not well described. Level of detail and progression of ideas not appropriate. Future directions/limitations confusing.	Starts narrowly, ends broadly, but findings not related to previously-undiscussed literature. Future directions mostly well-founded.	Starts narrowly, ends broadly. Findings presented clearly and related to existing literature. Future directions well-founded.
Quality of writing	Poor writing style. Difficult to follow and interpret. Poor sentence construction and word choice.	Adequate writing, with no more than 10 instances of poor writing choices. Several instances of choppy sentences or fragments.	Well-written, with no more than 4 errors of tense, grammar, word choice, or style. Ideas are connected logically, but the flow is not quite smooth.	Well written. Word choice, tense, grammar, and style are excellent. Ideas are connected logically and the paper flows well.
APA Style	More than 10 instances of APA errors.	No more than 7 instances of APA errors.	One to three APA-style errors.	No APA style errors.

OTHER IMPORTANT POLICIES:

Attendance: Your attendance is required, unless otherwise excused (in advance!) with a serious medical condition, or some other approved reason for missing (e.g., death in the family). I will not be taking attendance each day, but with a small group of students like this, your absence will be obvious. If you need to miss class, just make sure you are communicating with me ahead of time, and make sure you have a valid excuse. Please also make sure to communicate with your groups in the event that you miss class on a day when you should be working with them or presenting your projects. Failure to behave accordingly will result in my severe annoyance. This is a graduate course, so please just show up and be prepared to work each day.

In-class "work days." As noted above, there will be days dotted throughout the course that allow you to work on the various projects, and/or study for upcoming exams. You can choose to work on whatever you want during these days, but I do expect you to keep busy. I will float around the class on these days and see what you're up to, and assist as best I am able. Please come prepared to work on those days, and don't ask to go somewhere else to work with your group (unless you've cleared it with me ahead of time). I have tried to distribute these work days somewhat evenly, bearing in mind the various deadlines and projects you will be turning in throughout the course.

Cell phones: During class, please turn your phones off, or put them on silent. Do not check your phone during class. You're in class. You're an adult. You pay for this course. So please behave accordingly.

Late policy: You will lose 10% of your grade for every day that an item is late. Stay on top of deadlines, please! I don't like removing points unnecessarily.

Grade calculation: The exams are worth 40% of your overall grade, the *Frontiers* article is worth 20%, and the research project (including APA-style paper) is worth 40%.

Final letter grades are assigned as follows:

Percentage	Letter Grade
98% +	A+
93-98%	A
90-92%	A-
88-89%	B+
83-87%	B
80-82%	B-
78-79%	C+
70-77%	C
60-69%	D
59% (or worse)	F

Incomplete Grade: The current catalog statement is "Instructors may assign *I* grades only if the student is unable to complete the course due to circumstances beyond the student's control that develop after the last day to withdraw from the course. Examples of appropriate circumstances include documented illness, documented death or crisis in the student's immediate family, and similar circumstances. Job related circumstances are generally not appropriate grounds for assigning an *I* grade. In no case is an *I* grade to be used to avoid the assigning of *D*, *F*, *U,* or *RR* grades for marginal or failing work."

Complete information regarding the use of an "I" Incomplete grade can be found in the courses catalog (the link below is to the 2014-15 catalog as the 2015-16 catalog is not yet online):
http://nmsu.smartcatalogiq.com/en/2014-2015/Undergraduate-Catalog/General-Information/Regulations/Incomplete-Grade

Academic Misconduct: The Student Code of Conduct defines academic misconduct, non-academic misconduct and the consequences or penalties for each. The Student Code of Conduct is available in the NMSU Student Handbook online:
http://studenthandbook.nmsu.edu/

Academic misconduct is explained here:

http://studenthandbook.nmsu.edu/student-code-of-conduct/academic-misconduct/

Discrimination and Disability Accommodation:

Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act Amendments Act (ADAAA) covers issues relating to disability and accommodations. If a student has questions or needs an accommodation in the classroom (all medical information is treated confidentially), contact:

Trudy Luken, Director
Student Accessibility Services (SAS)
Corbett Center Student Union, Rm. 208
Phone: (575) 646-6840
E-mail: sas@nmsu.edu
Website: http://sas.nmsu.edu/

NMSU policy prohibits discrimination on the basis of age, ancestry, color, disability, gender identity, genetic information, national origin, race, religion, retaliation, serious medical condition, sex, sexual orientation, spousal affiliation and protected veterans status.
Furthermore, Title IX prohibits sex discrimination to include sexual misconduct: sexual violence (sexual assault, rape), sexual harassment and retaliation.

For more information on discrimination issues, Title IX, Campus SaVE Act, NMSU Policy Chapter 3.25, NMSU's complaint process, or to file a complaint contact:

Lauri Millot
Title IX Coordinator

Agustin Diaz
Title IX Deputy Coordinator
Office of Institutional Equity (OIE)
O'Loughlin House, 1130 University Avenue
Phone: (575) 646-3635
E-mail: equity@nmsu.edu
Website: http://eeo.nmsu.edu/

Other NMSU Resources:

NMSU Police Department:	(575) 646-3311 www.nmsupolice.com
NMSU Police Victim Services:	(575) 646-3424
NMSU Counseling Center:	(575) 646-2731
NMSU Dean of Students:	(575) 646-1722
For Any On-campus Emergencies:	911

CHEATING/PLAGIARISM POLICY:

Plagiarism is using another person's work without acknowledgment, making it appear to be one's own. Intentional and unintentional instances of plagiarism are considered instances of academic misconduct and are subject to disciplinary action such as failure on the assignment, failure of the course or dismissal from the university. The NMSU Library has more information and help on how to avoid plagiarism at http://lib.nmsu.edu/plagiarism/

EMAIL / CONTACT POLICY:

My typical response time to emails is between 24 and 72 hours. If you don't get a reply, please double check that you have the correct address (mhout@nmsu.edu) and try emailing me again (or stop me in class). I prefer that you send emails to my personal email rather than message me through Canvas. It's easier for me to respond through direct email, and therefore you are more likely to get a speedy response from me there.

CLASS SCHEDULE:

Date	Activity		Deadlines
Thursday, January 18, 2018	Student Surveys / Group Formation		
Tuesday, January 23, 2018	Syllabus Day / Group Introductions		
Thursday, January 25, 2018	Work day		
Tuesday, January 30, 2018	Work day		
Thursday, February 1, 2018	Work day		Research proposals due (2/2/18)
Tuesday, February 6, 2018	Project Proposals #1		
Thursday, February 8, 2018	Project Proposals #2		
Tuesday, February 13, 2018	Work day		
Thursday, February 15, 2018	Work day		
Tuesday, February 20, 2018	Exams 1-3		
Thursday, February 22, 2018	Work day		Frontiers proposals due (2/23/18)
Tuesday, February 27, 2018	Frontiers Article Proposals #1		
Thursday, March 1, 2018	Frontiers Article Proposals #2		
Tuesday, March 6, 2018	Work day		
Thursday, March 8, 2018	Work day		Draft of thesis / intro paragraph due (3/9/18)
Tuesday, March 13, 2018	Revised Project Proposals #1		
Thursday, March 15, 2018	Revised Project Proposals #2		Draft of key sentences / figures due (3/16/18)
Tuesday, March 20, 2018	Spring Break		
Thursday, March 22, 2018	Spring Break		
Tuesday, March 27, 2018	Exams 4-6		Research Intro due (3/28/18)
Thursday, March 29, 2018	Work day		Research Methods due (3/30/18)
Tuesday, April 3, 2018	Work day		Draft of full Frontiers article due (4/4/18)
Thursday, April 5, 2018	Data Collection #1		
Tuesday, April 10, 2018	Data Collection #2		
Thursday, April 12, 2018	Work day		Research Results due (4/13/18)
Tuesday, April 17, 2018	Work day		
Thursday, April 19, 2018	Exams 7-9		
Tuesday, April 24, 2018	Work day		Final Frontiers article due (4/24/18)
Thursday, April 26, 2018	Work day		
Tuesday, May 1, 2018	Final Group Presentations #1		
Thursday, May 3, 2018	Final Group Presentations #2		Final research paper due
Tuesday, May 8, 2018	Final Exams (10-15)		

Key: Orange = easy days; purple = work days; green = research project days; yellow = exam days; blue = Frontiers days

*** Please note: This schedule is subject to change, according to class demands! ***