**PSY 292: Research Methods I**

Block 6, February 2019

Monday-Friday 8am-10:45am | Law Hall 309

*This syllabus is subject to possible modification.*

INSTRUCTOR

* Instructor: Yunkyoung Loh Garrison (Preferred name: Yun; preferred gender pronouns: She/her/hers)
* Office: Law Hall 104
* Email: [ygarrison@cornellcollege.edu](mailto:ygarrison@cornellcollege.edu)
* Office Hours: Most days the work from 10:00-10:45 will be done independently in the classroom. Sometimes this time will be used to work on laboratories; sometimes this time will be used to work on your own independent research studies. This is an excellent time to consult with the instructor regarding any aspect of the course. Additional other office hours are by appointment.

TEXT

* Research Methods in Psychology (10th ed.) by Shaughnessy, Zechmeister, & Zechmeister (required)
* Publication Manual of the American Psychology Association (6th ed.) (strongly recommended)

COURSE GOALS AND OBJECTIVES

The purpose of this course is to introduce you to the process of *doing* research in psychology; therefore, this course will consist of lecture, discussions, laboratory activities, and the completion of an independent research project. Throughout the course, we will discuss the following topics.

1. The first primary course objective is to introduce students to essential components of the psychological research methods. Specifically, students will increase knowledge of basic research concepts including: theory formulation, hypothesis development, sampling procedures, research design, data collection, testing and measurement, internal validity, and external validity. We will briefly discuss qualitative research methods in psychology.
2. The second primary course objective is to develop student proficiency with data analysis, data interpretation, and scientific reporting. Specifically, students will increase knowledge of descriptive statistics, including measures of central tendency and measures of spread or dispersion, and different data visualization techniques. Students will also increase knowledge of a variety of inferential statistics frequently applied in psychological research, including t-tests, one-way ANOVA, one-way repeated measures ANOVA, factorial ANOVA, and Pearson’s coefficient of correlation. Students will also increase knowledge of confidence intervals and statistical measures of effect size.
3. The third primary aim of this course is to professional issues related to psychology. Specifically, we will examine ethical behavior in the context of research.

Cornell College Educational Priorities and Outcomes: Over the duration of this course, students will foster several skill sets which pertain to the Educational Priorities and Outcomes of Cornell College (available at  [https://www.cornellcollege.edu/library/faculty/syllabi/educational-priorities-and-outcomes.shtml).](http://www.cornellcollege.edu/library/faculty/syllabi/educational-priorities-and-outcomes.shtml).) Specifically, students will strengthen their quantitative reasoning skills, critical thinking skills, written/oral communication skills through research assignments and laboratories (College Objectives: Inquiry, reasoning, communication, knowledge). In addition, students will examine ethical principles related to research in psychology and related disciplines (College Objective: Ethical behavior). In conclusion, this course supports the Educational Priorities and Outcomes of Cornell College with emphases on knowledge, inquiry, reasoning, communication, and ethical behavior.

READING ASSIGNMENTS

The reading assignments are provided on the attached page. Students are expected to have read the material *prior to* the class period during which it will be discussed.

GRADING/ASSESSMENT

Students’ mastery of course-related knowledge and learning outcomes will be assessed via three methods. 1) Each student’s conceptual understanding of research concepts will be assessed via mid-term/final exams. 2) Each student’s understanding of research design and statistical analyses will be assessed via the completion of laboratory activities designed to develop proficiency with statistical analyses and the matching of various statistical analysis types to different research designs. 3) Student’s scientific writing skills will be assessed via the completion of a series of research activities which culminate in a final independent research project.

We will assess your progress in the class in the following ways:

**Point Distribution**

|  |  |
| --- | --- |
| Attendance/Participation | 20 |
| Exam 1 | 30 |
| Exam 2 | 30 |
| Exam 3 | 35 |
| Lab (#1-10) | 100 (10 each) |
| Research Project |  |
| - Part 1: Topic | 5 |
| - Part 2: Article summary & working hypothesis | 5 |
| - Part 3: Informed consent | 10 |
| - Part 4: Intro & Methods | 20 |
| - Part 5: Results & Discussion | 20 |
| - Part 6: Final presentation | 20 |
| - Part 7: Final paper | 30 |
| **Total** | **325** |

Course grades will be assigned according to the following percentages:

A 94-100% B 84-86% C 74-76% D 64-66%

A- 90-93% B- 80-83% C- 70-73% D- 60-63%

B+ 87-89% C+ 77-79% D+ 67-69% F below 60%

EXAMS

There will be two mid-term exams and one final exam in this course. The exam will be composed of multiple-choice questions, short-answer essay questions, and long-answer essay questions. The exams are *open-note but not open-book* and will be *time limited*. Because the exams are open-note I will encourage you to take copious notes, and because exams are time-limited I encourage you to organize your notes at the end of each week. Dates of exams are attached. No exams will be made-up without a documented excuse that the instructor deems sufficient to warrant missing the exam. Contact the instructor prior to the absence in order to verify that the excuse warrants an exam make-up.

RESEARCH LABORATORIES

Students will complete 10 research labs over the duration of the course. A significant portion of class time will be devoted to laboratory completion. Each laboratory project will be worth 10 points, for a total of 100 points. Late work can often disrupt the learning process. Please be sure to submit your laboratory (at 11:59pm on the day it is due). Overall, late work for any of the research activities related to the laboratory project will *not be accepted* without a documented excuse. In one occasion, a 24-hour grace periodwill be granted for only one of the 10 laboratory assignments.

RESEARCH PROJECT

In order to facilitate understanding of psychological research, as well as to enhance research writing, quantitative reasoning skills, and critical thinking skills, students will complete an ***independent*** research project. Students will write an APA style research paper based on the project.

ATTENDANCE AND COURSE ETIQUETTE

Daily attendance will be imperative in this course. There is much to cover, and most students find the class cognitively demanding. I will do some broad but brief lecturing; we will spend the bulk of time in class completing exercises that are designed to help you master the concepts covered during the course. Because daily activities build on previous ones, students will be allowed only 2 excused absences. If you must miss a class, email me *beforehand*, and plan to check with your classmates as to what was covered. If you miss more than two classes (excused or unexcused), the course grade will be lowered by 1/3 of the letter grade (e.g., from A to A-). Furthermore, habitual tardiness will result in the same penalty. More than three absences (excused or unexcused) will result in a failing grade (I reserve the right to adjust this policy in the event of unusual and unavoidable circumstances).

Student engagement in a course is a reliable predictor of learning outcomes. The ability to think deeply about material and integrate it one’s unique views and perspectives is vital to effective learning. Therefore, students are expected to participate regularly during class in an insightful and thoughtful manner which respects the viewpoints of other students and the instructor. Students are also expected to be attentive and nondisruptive during class. This includes arriving to class on-time, turning off all cell phones, remaining awake and alert, and avoiding distractions such as newspaper reading, knitting, web surfing, etc. Students choosing to engage in such behaviors will lose a significant number of participation points.

If the behavior 1) is habitual, 2) becomes significantly disruptive, 3) interferes with the instructor’s ability to teach effectively, or 4) disrupts the learning processes of other students, the offender will be asked to leave the course immediately and a failing grade will result.

Informed, frequent, active, engaged, thoughtful, participation will result in a high participation grade. You should strive to participate regularly each class period. Participation in class discussions of assigned readings is heavily weighted. It should be evident from this participation that the material was read, well understood, and critically consumed. Participation in class activities is also heavily weighted. Any absence or tardy arrival will impact the final participation grade. If a student is tardy by more than 10 minutes, the instructor reserves the right to count this as an absence.

TECHNOLOGY REQUIREMENTS

Students will be expected to regularly check Cornell College e-mail accounts for course-related announcements. In addition, students will develop a working knowledge of SPSS, a statistical analysis software package used commonly by researchers in the social sciences. Students will also demonstrate proficiency in the use of Microsoft Word or Microsoft Excel to develop tables and graphs, as well as using Microsoft PowerPoint to deliver final presentations. Students will also be expected to effectively search online databases to conduct literature searches.

STATEMENT ON DIVERSITY

Cornell College values diversity and strives to create a welcoming community in which all individuals are respected and included. We support respectful and meaningful inquiry across actual or perceived differences. These differences include ability, age, appearance, athletics and student organization involvement, ethnicity, family/marital status, gender, gender expression, immigration status, language, military/veteran status, nationality, political ideology, race, religion/spirituality, sex, sexuality, socio-economic status, and other personal identities and experiences. We live in an increasingly interconnected world. The ability to include, communicate, cooperate, and collaborate with diverse individuals is important. To that end, we engage in dialogue around issues of difference, identity, and ideology in the classroom, residence halls, and throughout campus. We embrace diversity, and as a result our viewpoints are enriched and our community strengthened (<https://www.cornellcollege.edu/about-cornell/mission/index.shtml>).

It is my intent that students from all diverse backgrounds and perspectives be well-served by this course and the diversity that students bring to this class be viewed as a resource, strength and benefit. I will present materials and activities that are respectful of diversity. Your suggestions about how to improve the value of diversity in this course are encouraged and appreciated.

ACADEMIC HONESTY

“Cornell College expects all members of the Cornell community to act with academic integrity. An important aspect of academic integrity is respecting the work of others. A student is expected to explicitly acknowledge ideas, claims, observations, or data of others, unless generally known. When a piece of work is submitted for credit, a student is asserting that the submission is her or his work unless there is a citation of a specific source. If there is no appropriate acknowledgement of sources, whether intended or not, this may constitute a violation of the College’s requirement for honesty in academic work and may be treated as a case of academic dishonesty. The procedures regarding how the College deals with cases of academic dishonesty appear in The Catalogue, under the heading ‘Academic Honesty’” (Cornell College, 2014).

ACADEMIC ACCOMMODATIONS

“Students who need accommodations for learning disabilities must provide documentation from a professional qualified to diagnose learning disabilities. For more information, see the Disability Services and Resources link: <https://www.cornellcollege.edu/academic-support-and-advising/disabilities/index.shtml>

Students requesting services may schedule a meeting with the disabilities services coordinator as early as possible to discuss their needs and develop an individualized accommodation plan. Ideally, this meeting would take place well before the start of classes. At the beginning of each course, the student must notify the instructor within the first three days of the term of any accommodations needed for the duration of the course.” (Cornell College, 2014). Students requesting accommodations should bring a documented list of suggested accommodations from the Office of Academic Advising. The course instructor will review the accommodation list with the student and agree upon reasonable accommodations.

RESOURCES

I encourage you to seek out College support systems, especially College librarians and personnel from the Center for Teaching and Learning. Here are the studios and their contact information:

(1) Quantitative Reasoning Studio—Director (Jessica Johanningmeier)

<https://www.cornellcollege.edu/library/ctl/qr/>

(2) Writing Studio

<https://www.cornellcollege.edu/library/ctl/writing-studio/index.shtml>

(3) Research (Social Sciences)—Librarian (Meghan Yamanishi):

<https://www.cornellcollege.edu/library/ctl/library.shtml>

RESEARCH PROJECT

To facilitate understanding of psychological research, as well as to enhance research writing, quantitative reasoning skills, and critical thinking skills, students will complete an ***independent*** research project. Students will write an APA style research paper based on the project.

**Part 1. Research Topic:** Our first step will be to generate ideas. We will spend our first days generating ideas for a research project, but you will need to settle on this fairly quickly. You will submit your topic of interest along with ***two*** background references. You should propose a study that can be conducted in a very short period of time (3-4 days) on the Cornell College campus. Note that you will want to select your primary background sources carefully; these should be peer-reviewed journal articles that bear on your topic and bring a slightly different aspect to your research question.

**\*Page limit:** 1 page, excluding a reference list page (title page is optional).

**\*Due date:** 2/12 (Tue) 11:59pm

**\*Rubric:** I will be grading this assignment primarily on three facets: 1) your topic statement; 2) the significance of the topic 3) the quality of the background literature you identify; and 4) proper APA formatting for a reference page.

**Part 2. Summary of one background article and working hypothesis**: You will submit a summary of one of your articles and working hypothesis. I will give you feedback on the level of detail and writing style.

**\*Page limit:** 2 pages, excluding a title page and reference pages.

**\*Due date:** 2/15 (Fri) 11:59pm

**\*Rubric:** The purpose of this assignment is to illustrate how to glean necessary information from your background sources and to explicitly state your working hypothesis and research design. At this point, I will not be grading for writing style, but rather on your ability to identify necessary facets from the article in light of your working hypothesis. I will give you feedback on this, which should then guide your approach in constructing the rough draft of your Introduction.

**Part 3. Informed Consent**: You will compose your Informed Consent using guidelines presented by the Cornell College Institutional Review Board.

**\*Page limit:** Depending on your project (typically 3-5 pages for research involving adults)

**\*Due date:** 2/19 (Tue) 11:59pm

**\*Rubric**: This is fairly straightforward; I will be assessing your Informed Consent according to IRB standards. Note that *you will not be released to collect data until I have given you my approval on your Informed Consent.* Once I have approved your Informed Consent form and research methodology you may begin collecting data. It will be your responsibility to recruit participants for your study.

**Part 4. Rough Draft of Intro and Methods**: Your Introduction should summarize each of the studies in a fair amount of detail, and include the rationale for each study, the measures used, the findings, and implications of the findings (how the findings may contribute to research and practice). Your Intro should then summarize across the studies, pointing out both congruence and inconsistencies in the background literature, which then leads logically to your research question. The Intro should be written in a clear and concise way in which each sentence and paragraph flow logically from each other, and the background literature should work together to provide a compelling rationale for the project. The Methods section should provide information about the population of interest and the proposed sample, the research design, the measures, and procedure.

**\*Page limit:** 6-8 pages excluding a title page and references

**\*Due date:** 2/22 (Fri) 11:59pm

**\*Rubric:** The overall rubric for Part 4 will be available on Moodle. Note that for the Part 4 I am less concerned about writing style and APA formatting; these can be polished and corrected for your final draft.

**Part 5. Rough Draft of Results and Discussion:** Your Results section will report the findings of your study and include the descriptive statistics, inferential statistics and either an APA style table or an APA style figure summarizing results. The Discussion section should summarize key findings and relate them to the current literature and to the existing theory reviewed in the Introduction. The Discussion section should also overview the limitations of the research, including limitations with the methodology. Finally, the Discussion should provide a ‘future directions’ section where specific ideas are given for the focus of future research.

**\*Page limit:** 7-9 pages excluding a title page and references.

**\*Due date:** 2/28 (Thu) 11:59pm

**\*Rubric:** The overall rubric for Part 4 will be available on Moodle. Note that for the Part 5, I am less concerned about writing style and APA formatting; these can be polished and corrected for your final draft. You must include 1) a table for correlation coefficients or descriptive statistics or 2) one summary table or figure to represent your findings. You must ***never fabricate or falsify data***.

**Part 6. Research Forum (Final presentation).** You will deliver a research presentation based on your independent research project. Each presentation will highlight research hypotheses, methodology, findings, and a discussion of findings. Microsoft PowerPoint will be used in all presentations.

**\*Time limit:** 7-10 minutes

**\*Presentation day:** 3/5 (Tue) in class

**\*Rubric:** The overall rubric for Part 6 will be available on Moodle.

**Part 7. Final Paper:** The final paper is due Wednesday, March 6th at 11:59 p.m. This will include all the required components (Title page, Abstract, Intro, Methods and required subsections, Results, Discussion, References, Figures and/or Tables, and Appendices [if necessary]).

**\*Page limit:** 15-20 pages excluding a title page and references.

Along with final draft, you will also submit copies of informed consent you collected, your raw data, an electronic version of the SPSS dataset, and an electronic version of SPSS output. \*These supportive materials do not have page limit.

**\*Due date:** 3/6 (Wed) 11:59pm

**\*Rubric:** The overall rubric for Part 7 will be available on Moodle.

APA papers: All written work must be submitted via the appropriate Moodle Assignment folder and must be submitted as a ***Word*** document. ***Late work will not be accepted*** without a documented excuse approved by the instructor for the independent research project (Part 1-7).

**Course Schedule**

*This course schedule is subject to possible modification.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Mon | Tue | Wed | Thu | Fri |
| Lecture | **Day 1: 2/11**  SSZ 1,2  - Course orientation  - Introduction to research/scientific methods  - Research project overview | **Day 2: 2/12**  SSZ 3  IRB Handbook (optional)  - Research ethics  - Literature search | **Day 3: 2/13**  SSZ 4  - Observation  - IRB | **Day 4: 2/14**  SSZ 5  - Survey design | **Day 5: 2/15**  SSZ 13  **-** Communication in psychology  - Research writing |
| SPSS Lab |  | Setting up SPSS | Lab 1. Due 11:59pm\*  Data management | Lab 2. Due 11:59pm\*  Demographic statistics | Lab 3. Due 11:59pm\*  Reliability |
| Research  Project |  | Part 1. Due 11:59pm\*  Potential topic and reference |  |  | Part 2. Due 11:59pm\*  Summary of one article & hypothesis |
| Lecture | **Day 6: 2/18**  Exam 1  9:00-10:10 (70 minutes) | **Day 7: 2/19**  SSZ 11 (pp.342-359)  - Descriptive statistics | **Day 8: 2/20**  SSZ 11 (pp. 367-375)  - Correlation  - Regression | **Day 9: 2/21**  SSZ 6; SSZ 11 (pp.359-360)  - Independent groups designs I  - Comparing two means | **Day 10: 2/22**  Data Collection –  **No Class** |
| SPSS Lab |  | Lab 4. Due 11:59pm\* Descriptive statistics, histogram, stem-and-leaf plots | Lab 5 Due 11:59pm\*  Scatterplot, correlation coefficient | Lab 6 Due 11:59pm\*  Independent sample t-test |  |
| Research  Project |  | Part 3. Due 11:59pm\*  Informed Consent |  |  | Part 4. Due 11:59pm\*  Draft: Intro & Methods |
| Lecture | **Day 11: 2/25**  Exam 2  9:00-10:30 (90 minutes) | **Day 12: 2/26**  SSZ 6; SSZ 12 (pp.392-403)  - Independent group designs II  - Comparing more than two means | **Day 13: 2/27**  SSZ 7; SSZ 12 (pp.403-407)  - Repeated Measures Designs | **Day 14: 2/28**  SSZ 8  - Complex Designs  - Two-way ANOVA | **Day 15: 3/1**  SSZ 9  - Single-Case Designs |
| SPSS Lab |  | Lab 7 Due 11:59pm\*  One-way ANOVA | Lab 8 Due 11:59pm\* Repeated ANOVA | Lab 9 Due 11:59pm\*  Two-way ANOVA | Lab 10 Due 11:59pm\*  Data visualization |
| Research  Project |  |  |  | Part 5. Due 11:59pm\*  Draft: Results & Discussion |  |
|  | **Day 16: 3/4**  SSZ 10  - Quasi-Experimental Design  - Qualitative research methods | **Day 17: 3/5**  Research Forum | **Day 18: 3/6**  Exam 3  9:00-10:30 (90 minutes) |  |  |
| SPSS Lab |  |  |  |  |  |
| Research  Project |  | Part 6. During the class time\*  Final presentation | Part 7. Due 11:59pm\*  Final paper & Supporting materials |  |  |