PSYC 2314-01
Psychological Research Methods

Fall 2017

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Office Hours: MWF: 11:00 AM–12:00 PM; MWF: 1:00 PM–2:00 PM, TR: 9:00 AM – 11:00 PM, and by appointment

1 Course Information

1.1 Meeting

Time: MWF: 9:00 AM–9:50 AM
Location: Wells Science Hall (WSH), 131
Course Website: myCourses
Prerequisite: PSYC 1301

1.2 Description

This course will introduce students to research methods in psychology. Students will develop an understanding of various research-related issues such as ethics, sampling, study design, reliability and validity, data analysis, and the reporting of results. Students will also complete a group research project in which they will design, conduct, and report the results of a study.

1.3 Course Objectives

At the conclusion of this course, students should be able to:

(1). Gain factual knowledge such as important terminology, classifications, methods, and trends; (2). Learn fundamental principles, generalizations, and theories; and (3). Learn to apply course material to improve decision-making, problem solving, and critical thinking skills related to experimental design and statistical analysis by:

A. Becoming more informed consumers of research
B. Developing a greater appreciation for the scientific method
C. Being able to critically evaluate whether claims are strongly supported by scientific evidence
D. Considering the ethical issues associated with psychological research
E. Learning skills for reading and evaluating psychological research
F. Being able to identify and critically evaluate experimental, quasiexperimental, nonexperimental, and qualitative research designs
G. Knowing the basics of APA style

H. Designing and conduct a study
I. Analyzing and interpret results of a study
J. Reporting study results in APA style
K. Communicating research findings (in both written and oral form)

1.4 Readings

Textbook:
Privitera, G. J. (2016). *Research methods for the behavioral sciences* (2nd ed.). Thousand Oaks, CA: SAGE.

Study Guide:
Privitera, G. J. (2017). *Student study guide with IBM SPSS workbook for* Research methods for the behavioral sciences (2nd ed.). Thousand Oaks, CA: SAGE.

1.5 Class Structure

1.5.1 Team Based Learning

This course is delivered using a team based learning (TBL) format. Accordingly, you will be assigned to a team with approximately 4-5 members. Teams are created in class during the first week and remain permanent for the duration of the course. Teams will be formed using a team-formation software application. You will receive more information about completing the team-formation requirements during the first week of class. Teams will be guided through the following course learning modules.

1.5.2 Learning Modules

PSYC 2314-01 is divided into six (6) learning modules:

1. Introduction to Scientific Thinking
2. Strategies and Ethics in Psychological Science
3. Measuring, Sampling, and Selecting Designs
4. Non-Experimental Designs
5. Quasi- and Experimental Designs
6. Analyzing and Communicating Research Data

Modules have a sequence of 3 discrete learning phases:

1. **Outside Reading and Preparation:**

   In this phase, you complete all specified readings outlined in the Tentative Course Calendar by the date due. The purpose of this phase is to prepare you for individual and team quizzes. I recommend you do the following when preparing for quizzes: (a) read the chapter(s), (b) outline the chapter(s) using the notes/prompts provided in the text; (c) define the terms and answer the review questions at the end of each chapter; (d) make the review questions into multiple choice questions; (e) think about how you can apply the information to yourself.

2. **Readiness Assessment:**

   At the conclusion of each module you will complete an individual readiness quiz (IRQ) and a team readiness quiz (TRQ). These quizzes measure your comprehension of the assigned readings and lecture content. After completing the IRQ, you join your team and, together, retake the quiz. Once the individual and team testing periods have concluded, the instructor may give a mini-lecture to clarify concepts that are not well understood as evidenced by the individual quiz scores. The purpose of this phase is to ensure that you and your teammates have sufficient foundational knowledge to progress through the course material.

A. Readiness Assessment Described:

- **Individual Readiness Quizzes (IRQs):**
  This assessment process requires that you complete a 20 question, multiple choice quiz taken individually. Questions from each IRQ are based on the reading for each module, outlined in the Tentative Course Calendar.
- **Team Readiness Quizzes (TRQs):**
  Following the IRQ, the same multiple choice quiz is re-taken with your team. Your team will be provided with a scratch-off-like answer card. Your team will receive 1 point if you uncover the correct answer on the first scratch, 0.5 point for a second scratch, and 0.25 point for a third scratch. Correct answers are indicated by a small star (★).

3. In-Class Applications:

In this phase, teams will *apply* foundational knowledge, acquired in the first two phases, by completing a variety of in-class team activities. Team application exercises will pose a question/scenario using research articles, case studies, et al. and ask you, as a team, to arrive at a consensus by selecting a "best" solution out of options provided. Your Team will need to poll each member, listen to each member's ideas and their explanation of why their idea would work, and then reach a team consensus. At the end of your deliberation, all of the teams will share their findings, followed by a class discussion.

At the conclusion of each module each team will complete a graded team application exercise (GTAE) that synthesizes the concepts to date. GTAEs are worth 20 points and will be based on dimensions of knowledge demonstration and application, communication, and team functioning. Six (6) team exercises will be graded. You will have the opportunity to complete one (1) ungraded TAE at the start of the semester for the purpose of practice and familiarizing yourself with the process. The scoring rubric will be posted online and will be discussed in detail during the practice module.

1.6 Course Communication

1.6.1 Email

Most all course communication outside of class will take place via email. I will routinely email you course updates and announcements to your UMHB-assigned email address. Thus, you should check your email frequently. Likewise, due to the nature of this class and the corresponding assignments, you will likely need to contact me with questions. I am committed to responding as quickly as possible to your questions via email. As a result, you can expect me to respond, on average, within several hours of your email—often sooner. However, in some circumstances, a personal visit during office hours or other scheduled appointment may be more efficient than email. You are welcome to call me on my office line: (254) 295-4553. This can be an even more efficient method for quick troubleshooting inquiries.

1.6.2 Remind

Although I do not anticipate delaying or canceling any class meeting(s), there may be extenuating circumstances which require me to do so. In these situations, I will communicate with you through a free, safe, and one-way text messaging service called Remind. To sign up for these alerts, text `@psyc2314a` to 81010 and follow the instructions. If you have trouble with this method, try texting `@psyc2314a` to (254) 296-8301.

2 Course Requirements

2.1 Individual Assignments

2.1.1 Human Subjects Research Training

Each student is expected to understand the research process and ethical issues that are pertinent to conducting research with human subjects. Completion of the Collaborative Institutional Training Initiative (CITI) certification in the protection of human research participants will help to facilitate a greater understanding of these issues. The training is free and can be accessed here: CITI Human Subjects Research Training. We will discuss this project in greater detail as the semester progresses. This assignment is due by 11:59 PM, Friday, September 08, 2017.

2.1.2 Individual Readiness Quizzes (IRQs)

IRQs are 20-question multiple choice quizzes that students complete individually in class. Questions from each IRQ are based on the reading for and lectures from each module as outlined in the Tentative Course Calendar. You will be provided with a Scantron form to complete this assignment.

Table 1: Individual Quiz Dates

	Module	Due
0.	Introduction to Scientific Thinking	08/30/2017
1.	Strategies and Ethics in Psychological Science	09/11/2017
2.	Measuring, Sampling, and Selecting Designs	09/29/2017
3.	Non-Experimental Designs	10/13/2017
4.	Quasi- and Experimental Designs I	10/27/2017
5.	Quasi- and Experimental Designs II	11/13/2017
6.	Analyzing and Communicating Research Data	11/29/2017

2.1.3 Final Exam

The final exam will be completed individually and will consist of a cumulative multiple-choice test. In addition, you will complete the final peer evaluation process described in section 2.3.2. The final exam for this course is scheduled at 10:30 AM – 12:30 PM Monday, December 04, 2017.

2.2 Team Assignments

2.2.1 Team Readiness Quizzes (TRQs)

Following the IRQ, the same multiple choice quiz is re-taken with your team. Your team will be provided with a scratch-off-like answer card. Your team will receive 1 point if you uncover the correct answer on the first scratch, 0.5 point for a second scratch, and 0.25 point for a third scratch. Correct answers are indicated by a small star (★).

Table 2: Team Quiz Dates

	Module	Due
0.	Introduction to Scientific Thinking	08/30/2017
1.	Strategies and Ethics in Psychological Science	09/11/2017
2.	Measuring, Sampling, and Selecting Designs	09/29/2017
3.	Non-Experimental Designs	10/13/2017
4.	Quasi- and Experimental Designs I	10/27/2017
5.	Quasi- and Experimental Designs II	11/13/2017
6.	Analyzing and Communicating Research Data	11/29/2017

2.2.2 GTAEs

Team application exercises will pose a question/scenario using research articles, case studies, et al. and ask you, as a team, to arrive at a consensus by selecting a “best" solution out of options provided. Your Team will need to poll each member, listen to each member’s ideas and their explanation of why their idea would work, and then reach a team consensus. At the end of your deliberation, all of the teams will share their findings, followed by a class discussion.

Table 3: Graded Team Application Exercises (GTAEs)

	Module	Due
0.	Introduction to Scientific Thinking	08/28/2017
1.	Strategies and Ethics in Psychological Science	09/08/2017
2.	Measuring, Sampling, and Selecting Designs	09/27/2017
3.	Non-Experimental Designs	10/11/2017
4.	Quasi- and Experimental Designs I	10/25/2017
5.	Quasi- and Experimental Designs II	11/10/2017
6.	Analyzing and Communicating Research Data	11/27/2017

2.3 Grade Calculation

2.3.1 Individual and Team Performance

Table 4 below describes all individual and team assignments, their point value, and proportion of weighted total. Scores from peer evaluations are multiplied by the team performance score. In this sense, each team member's final team performance score begins with the overall team performance score. Depending on your peer evaluation score, your particular team performance score can increase or decrease accordingly. Section 2.3.2 describes this process in more detail.

Table 4: Individual and Team Assignments and Point Values

Assignment	*n*		Points		Total	Prop.
Completion of CITI Human Research Subjects Training	1	×	10	=	10	.05
Individual Readiness Quizzes (IRQs)	6	×	20	=	120	.25
Final Exam	1	×	100	=	100	.25
Attendance	45	×	0.111111111	=	5	.05
	Individual Performance Total			**=**	**235**	**.60**
Team Readiness Quizzes (TRQs)	6	×	20	=	120	.20
Graded Team Activity Exercises (GTAEs)	6	×	20	=	120	.20
	Team Performance Total			**=**	**240**	**.40**

2.3.2 Peer Evaluation

At the end of the course, you will complete a confidential peer evaluation to assess the contribution of the other members of your team. You will be evaluating each member on their participation in team activities (e.g., Did they come to class regularly? Were they prepared for the day's activity? Did they contribute productively to the team? Respect others' ideas?, etc.) When evaluating your team members, you will distribute 100 points among the other members of your team. We will likely have teams of 4 students. Thus, each team member will be evaluated by the other 3 members of the team. The peer evaluation form will be distributed on the day of the final exam.

The peer evaluation process will also be completed at the midpoint of the semester. This allows you to practice and gain experience with the process. More importantly, it gives you valuable feedback from your teammates about your performance as a team member.

To calculate your individual peer evaluation score, the instructor will take the sum of all scores assigned to you by your peers and divide that total by 100. The resulting quotient will be multiplied by your team's performance score in order to obtain the individual team performance score.

For example, let's assume you achieved 193 of the 235 total individual points available. Let's also assume your team received 107 of the 120 points from TRQs and 110 of the 120 points from GTAEs. Likewise, assume your individual

composite performance evaluation score was .91 (91/100). *Your* particular team performance score would be:

$$(100 + 110) = 217 \times .91 = 197.47 \tag{1}$$

Thus, when we combine your individual point total with your share of your team's points, your final grade would be:

$$(193 + 197.47) = (390.47/475) \times 100 = 82.20 \tag{2}$$

2.3.3 Final Grade Calculation

Please note that the online gradebook in myCourses may not accurately reflect the weighted grading system used in this course. Instead, please refer to the grade calculation demonstration spreadsheet located on the course website under *Files* > *Grading* (`2314-01_Grade_Demo.xlsx`). The table below describes the point range required to achieve a given letter grade.

Table 5: Final Grade Point Range Requirements

Grade	Point Range	Percentage	Grade Points
A	427.50 – 475.00	90 – 100	4.0
B	380.00 – 422.75	80 – 89	3.0
C	332.50 – 375.25	70 – 79	2.0
D	285.00 – 327.75	60 – 69	1.0
F	000.00 – 280.25	00 – 59	0.0

3 Policies

3.1 Attendance

The College of Humanities and Sciences stipulates that attendance policies will be set at the departmental level. The Department of Psychology strongly encourages attendance at all class sessions, as absenteeism is detrimental to performance in the course. Additionally, faculty in the department may factor attendance into the final calculation of course grades, given that the total amount of the grade based on attendance does not exceed 20%.

The percentage of the course grade determined by attendance in this course is 5%.

Your regular attendance in this course is expected. I will record and maintain attendance records for each student. Attendance is worth 5% of your final grade. In other words, if you attend 100% of the scheduled class meetings you will earn the complete 5% attendance total. Any University- or otherwise-excused absence will not count toward this total. At the conclusion of the semester, the percentage of class meetings you attended will be multiplied by 0.05 to obtain your attendance grade.

3.2 Late Work

All assignments are considered late if submitted after the date and time specified in the syllabus and/or *myCourses* site. This policy will be enforced in the event that assignment deadlines are revised during the course of the term. Assignments submitted late will result in a penalty of 20% per day for a period of up to five (5) days.

For example, if an assignment is due on September 08, 2017 and is submitted within 24 hours of the due date and time that assignment will result in an automatic deduction of 20% from the assignment raw score. In other words, if you submit an assignment worth 10 points on September 09, 2017, and the assignment was originally due September 08, 2017, and you score a 9.5/10, then your new score would be:

$$9.5 - (9.5)(0.20) = 7.6. \tag{3}$$

Assignments submitted more than five calendar days late will receive a grade of zero. To ensure fairness, this policy will be strictly enforced. Exceptions under the conditions described below in section 3.3.4 may be made, but will require at least 24 hours advance permission from the instructor.

3.3 Exams and Quizzes

3.3.1 Exam/Quiz Day Decorum

Once any in-class exams or quizzes are distributed you may not leave the classroom until you have submitted your answer and test forms. This policy also applies to the period between individual and team quizzes in courses using team-based learning.

3.3.2 Mobile Phones

The use of mobile or cell phones during tests is strictly prohibited. All mobile or cell phones should be placed on airplane mode during tests. This policy applies especially to the time period between individual quizzes and team quizzes. Students are not allowed to use their mobile or cell phone during the time between completing an individual quiz and dating to start the team quiz.

3.3.3 Tardiness on Exam/Quiz Days

Students who arrive 10 or more minutes late will still be allowed to complete IRQs. However, in order to allow teams sufficient time to complete TRQs, these students will join their team once they have completed the IRQ.

3.3.4 Missed Exams

Missed IRQs may be retaken under the following circumstances only:

1. Death in the immediate family (parent, spouse, sibling) within two weeks prior to the exam date.
2. Participation in an official UMHB-sponsored academic or sporting event.
    a. IRQs must be scheduled and completed prior to the in-class administration.
3. Unforeseeable medical emergency affecting yourself, your spouse, or your child (e.g., automobile accident, major sickness, et al.).

Individuals who miss a TRQ may not be penalized by the instructor. However, your team members may elect to evaluate you accordingly.

Note: Routine medical appointments or clinical visits related to minor illnesses do not qualify as an unforeseeable medical emergency. Likewise, conflicts with a work schedule or trips not related to official UMHB events do not qualify for retaking a missed exam.

3.4 Miscellaneous

3.4.1 Food and Drink

No food of any kind will be allowed in the classroom. You may bring beverages into the classroom with a sealable lid or cap. Otherwise, no drinks are allowed.

3.4.2 Mobile Phones

The use of mobile or cell phones during class or tests is strictly prohibited. All mobile or cell phones should be placed on airplane mode during class and tests. This policy applies especially to the time period between individual quizzes and team quizzes. Students are not allowed to use their mobile or cell phone during the time between completing an individual quiz and dating to start the team quiz.

4 Miscellanea

4.1 Credit Hour

The semester credit hour is a unit by which an institution measures its course work. The value of a semester credit hour can be determined by time, the educational experience, and outside preparation by the student.

The following constitutes the definition of a semester credit hour for various modes of instruction offered at UMHB:

1. At least fifteen (15) contact hours, as well as, a minimum of thirty (30) hours of student homework is required for each semester credit hour.
2. Laboratory courses, with little outside work, require a minimum of forty-five (45) contact hours. If moderate outside work is required, thirty (30) contact hours are required.
3. Internships, clinical, and field experiences require a minimum of forty-five (45) clock hours for each semester credit hour.
4. For online, hybrid, and other nontraditional modes of delivery, credit hours are assigned based on learning outcomes that are equivalent to those in a traditional course selling, forty-five (45) hours of work by a typical student for each semester hour of credit.

4.2 Academic Integrity

Students who violate the standards outlined in the University's policy on classroom expectations and ethics shall be subject to appropriate discipline as determined by the instructor of the relevant class, and/or in some cases, by the administration of the University. Penalties for violating the University?s academic integrity standards can range from receiving a lower grade (including zero) on an assignment to being expelled from the University. You may review the policy in full here: http://registrar.umhb.edu/classroom-expectations-ethics

4.3 ADA Statement

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your professor and the Accommodation & Student Assistance Program office in the Robert & Linda Black Center for Counseling, Testing & Health Services, Mabee Student Center, Suite 310, as early as possible in the term.

For more information on these and other student academic policies, please consult the current edition of the UMHB student handbook.

4.4 Disclaimer

Syllabus is subject to change at instructor's discretion.

5 Tentative Course Calendar

MODULE	WK	DATE	TOPIC(S)	READ.	DUE
—	1	Mon. 21-Aug	Introduction to Course/Syllabus Review	—	—
Introduction to Scientific Thinking	1	Wed. 23-Aug	Science as a Method of Knowing	Ch. 01	—
—	1	Fri. 25-Aug	Goals of Science	—	—
—	2	Mon. 28-Aug	—	—	**GTAE 0**
—	2	Wed. 30-Aug	—	—	**IRQ 0/TRQ 0**
Strategies and Ethics in Psychological Science	2	Fri. 1-Sep	Generating Scienctific Ideas/Developing Scientific Hypotheses	Chs. 02-03	—
—	3	Mon. 4-Sep	HOLIDAY	—	—
—	3	Wed. 6-Sep	Ethics in Behavioral Research	—	—
—	3	Fri. 8-Sep	—	—	**GTAE 1/CITI Training**
—	4	Mon. 11-Sep	—	—	**IRQ 1/TRQ 1**
Measuring, Sampling, and Selecting Designs	4	Wed. 13-Sep	Constructs and Operational Definitions	Chs. 04-06	—
—	4	Fri. 15-Sep	Types of Scientific Variables	—	—
—	5	Mon. 18-Sep	Scales of Measurement	—	—
—	5	Wed. 20-Sep	Samples and Populations	—	—
—	5	Fri. 22-Sep	Methods of Sampling	—	—
—	6	Mon. 25-Sep	Categories of Research Designs	—	—
—	6	Wed. 27-Sep	—	—	**GTAE 2**
—	6	Fri. 29-Sep	—	—	**IRQ 2/TRQ2**
Non-Experimental Research Designs	7	Mon. 2-Oct	Existing Data Designs	Chs. 07-08	—
—	7	Wed. 4-Oct	Survey Designs	—	—
—	7	Fri. 6-Oct	Correlational Designs	—	—

Continued on next page

MODULE	WK	DATE	TOPIC(S)	READ.	DUE
—	8	Mon. 9-Oct	Regression and Prediction	—	—
—	8	Wed. 11-Oct	—	—	**GTAE 3**
—	8	Fri. 13-Oct	—	—	**IRQ 3/TRQ 3**
Quasi- and Experimental Designs I	9	Mon. 16-Oct	Overview of Quasi-Experimental Designs	Chs. 09-10	—
—	9	Wed. 18-Oct	Overview of Between-Subjects Designs	—	—
—	9	Fri. 20-Oct	Independent-Samples *t*-Tests	—	—
—	10	Mon. 23-Oct	Between Groups ANOVA	—	—
—	10	Wed. 25-Oct	—	—	**GTAE 4**
—	10	Fri. 27-Oct	—	—	**IRQ 4/TRQ 4**
Quasi- and Experimental Designs II	11	Mon. 30-Oct	Overview of Within-Subjects Designs	Chs. 11-12	—
—	11	Wed. 1-Nov	Paired-Samples *t*-Tests	—	—
—	11	Fri. 3-Nov	Within-Subjects ANOVA	—	—
—	12	Mon. 6-Nov	Overview of Factorial Designs	—	—
—	12	Wed. 8-Nov	Main Effects and Interactions	—	—
—	12	Fri. 10-Nov	—	—	**GTAE 5**
—	13	Mon. 13-Nov	—	—	**IRQ 5/TRQ 5**
Analyzing and Communicating Research Data	13	Wed. 15-Nov	Statistical Significance	Chs. 13-15	—
—	13	Fri. 17-Nov	Practical Significance	—	—
—	14	Mon. 20-Nov	Communicating Results	—	—
—	14	Wed. 22-Nov	HOLIDAY	—	—
—	14	Fri. 24-Nov	HOLIDAY	—	—
—	15	Mon. 27-Nov	—	—	**GTAE 6**
—	15	Wed. 29-Nov	—	—	**IRQ 6/TRQ 6**
—	15	Fri. 1-Dec	Final Exam Review Day	—	—
—	16	***Mon. 04-Dec***	***FINAL EXAM, 10:30 AM***	—	—