

**Advanced Research in Psychology  
2021-2022 Spring Semester**

<b>Course Code:</b>	<b>PSY 403</b>
<b>Lecturer:</b>	<b>Asuman Buyukcan Tetik (Asuman.buyukcan@sabanciuniv.edu)</b>
<b>Credits:</b>	3
<b>Office hours:</b>	Please email me to make an appointment.
<b>TAs:</b>	Mustafa Anil Topal ( <a href="mailto:anil.topal@sabanciuniv.edu">anil.topal@sabanciuniv.edu</a> ) Turan Deniz Ergun ( <a href="mailto:tergun@sabanciuniv.edu">tergun@sabanciuniv.edu</a> )
<b>Zoom Link:</b>	<a href="https://sabanciuniv.zoom.us/j/2039685217">https://sabanciuniv.zoom.us/j/2039685217</a>

### 1. Brief Introduction

This course aims to develop knowledge and skills in psychological research, literature review, data analysis, and scientific writing. Topics of this course include, but are not limited to, hypothesis generation, the structure of scientific articles, description of methods, and writing up scientific research papers.

### 2. Course Hours and Structure

This course will be composed of one online (Thursdays 11:40-12:30) and two hybrid (11:40-13:30, FASS G006) course hours.

### 3. Required Text

We will not use a specific textbook for this course. Instead, you will be assigned chapters from different books (please see the list below) and some articles.

### 4. Assessment

Type of assessment	% of total grade
4 Papers (= Group Work)	60% (15% each)
Online exercises (Dates will be announced one week in advance)	15%
Take-home final exam	25%
<b>Total</b>	<b>100%</b>

#### 4.1. 4 papers (60% of total grade - 15% for each paper) (Group Work)

You are expected to write 4 papers throughout the semester. This will be group work. Each group will be composed of 3 individuals (this number may change according to the number of registered students).

At the beginning of the semester, you will be given a dataset. Using that dataset, you will write the introduction, method, results, and discussion sections (please see the timetable below for details) with your group members. You will not collect data because of the limited time, but you are expected to conduct the analyses with your group members. More information about the dataset, research questions, and expectations will be provided during the semester.

#### 4.2. Online exercises (15% of total grade)

There will be 5 online exercises with a few questions. Online exercise dates will be announced one week in advance. The exercises will take 5-10 minutes based on the number of questions. Only four online exercises with the highest grades will be considered for your final grade calculation.

#### 4.3. Take-home final exam (25% of total grade)

This exam will include a mix of fill-in, free-response, multiple-choice, and short-answer questions. Questions in the exam will be based on everything (i.e., slides, handouts, discussions, etc.) covered in lectures and on all the reading materials (i.e., assigned chapters, assigned articles). The final exam will be cumulative (i.e., all class materials from the beginning of the semester will be covered).

#### 4.4. Research points (Extra credits)

Students can optionally serve as participants in research that is run by Sabanci University researchers. By participating in research, you can get research points. For this course, you will be able to earn up to 6 research points (1 credit equals ~ 29 minutes of research participation). These 6 RP points will be converted to 3 points added to your overall total at the end of the semester. More information on the available research projects will be provided during the semester.

You will be able to sign up for the experiments and get your research points through the online Sona system at <http://sabanciuniv.sona-systems.com>. Please, carefully read the Guide for Students: Sabanci University Experiment Credits System (Sona), which will be uploaded to the Course Website.

### 5. Grading

>=90	A
85-89	A-
80-84	B+
75-79	B
70-74	B-
65-69	C+
60-64	C
55-59	C-
50-54	D+
45-49	D
0-44	F

### 6. Timetable

#### Week 1

- Syllabus
- The Steps of the Research Process - *Bordens & Abbott, 2002, pp. 20-23*

#### Week 2

- Developing Good Research Questions - *Bordens & Abbott, 2002, pp.28-33*
- Characteristics of a good theory - *Bordens & Abbott, 2002, pp.44-46*
- Gray, K., & Wegner, D. M. (2013). Six guidelines for interesting research. *Perspectives on Psychological Science, 8*, 549-553.
- Alon, U. (2009). How to choose a good scientific problem. *Molecular Cell, 35*, 726-728.
- Schwartz, M. A. (2008). The importance of stupidity in scientific research. *Journal of Cell Science, 121(11)*, 1771-1771.

#### Week 3

- Sections of an article

- Reading the Research Report - *Bordens & Abbott, 2002, pp. 78-81*
- Writing Research Reports: *Morling, 2012, pp. 487-498*
- Literature Review
- Introduction Section

#### **Week 4**

- Sections of an article
- Sharing the survey with the class
- *Sample articles will be assigned*

#### **Week 5**

- Selection of Group Research Questions – Meetings with Each Group

#### **Week 6**

- Sections of an article
- Overview of main analysis methods
- Meanings of Moderation and Mediation
- Applying Statistical Methods in Your Own Research Project, *Aron, Coups, Aron, 2011, Chapter 12, pp. 422-434*
- Statistics Review: *Morling, 2012, pp. 474-486*
  - Common Inferential Statistics (t-test, ANOVA, correlation, regression)

#### **Week 7**

- Sections of an article
- Getting started with the analyses
- *Sample articles will be assigned*

#### **Week 8**

- Getting started with the analyses
- Sharing the data with the class

#### **Week 9-13**

- Analyses continued
- Back to Common Inferential Statistics
- Back to Moderation & Mediation: Chapter 7, *Cohen, Cohen, West, & Aiken, 2003*
- Week 9: SEMESTER BREAK

#### **Week 14**

- Current Issues in Psychology: Open Science, Reproducible Science, Fraud etc.
- *Sample articles will be assigned*
- Wrap Up

#### **UPDATED DUE DATES**

- Method paper due date: 23 May 2022, 17:00 am (both the paper and syntax file should be submitted)
- Online exercise 4: 26 May 2022, class time
- Online exercise 5: 2 June 2022, class time
- Results paper due date: 3 June 2022, 17:00 (both the paper and syntax file should be submitted)
- Take-home exam due date: 14 June 2022, 17:00 (Questions will be shared with you on 10 June 2022, 17:00)
- Discussion paper due date: 25 June 2022, 17:00 (no extension possible. Grade submission on 29 June 2022)

#### References:

- Alon, U. (2009). How to choose a good scientific problem. *Molecular Cell, 35*, 726-728.
- Aron, A., Coups, E., & Aron, E. N. (2011). *Statistics for The Behavioral and Social Sciences: Pearson New International Edition: A Brief Course*. Pearson Higher Ed.: New Jersey

- Bordens, K. S., & Abbott, B. B. (2002). *Research design and methods: A process approach*. McGraw-Hill: New York.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences*. New York: Routledge.
- Gray, K., & Wegner, D. M. (2013). Six guidelines for interesting research. *Perspectives on Psychological Science*, 8, 549-553.
- Morling, B. (2012). *Research methods in psychology: Evaluating a world of information*. New York: Norton.
- Schwartz, M. A. (2008). The importance of stupidity in scientific research. *Journal of Cell Science*, 121(11), 1771-1771.

## 7. Other announcements

8. I may slightly change this syllabus throughout the semester. I will let you know in case I make any changes.
9. Please do not forget that as a university policy, all University members have to behave according to the academic principles mentioned here: <https://www.sabanciuniv.edu/en/academic-integrity-statement>. Please read all those principles.
10. Plagiarism from either external resources or your classmates' work or any type of fraud (e.g., cheating, copying) will not be tolerated. Students who engage in these behaviors will fail in this course and be a subject of a disciplinary inquiry.
11. Any type of work that will be graded (presentations, response/reaction papers, mini-exams, online exercise, group works, etc.) has an exam status, and any kind of "intihal" (plagiarism) in the graded work will be categorized as cheating.
12. Make-ups can be allowed only in case of an emergency (e.g., medical emergency). The student should email me as soon as possible in this type of situation.
13. **Your webcam must always be on during online assessments (e.g., discussion hours, presentations, quizzes, mini-exams, and exams), if not, your assessments will be void. You must connect to the Zoom link for the course with your official Sabancı University email account and not utilize other email accounts.**