SCED 301.01
INFERENTIAL STATISTICS I
Summer 2026

Instructor: Dr. Serkan ARIKAN
Office: ETA-B 303
Email: serkan.arikan1@bogazici.edu.tr

Time: MMTTWWThTh78787878

Office Hours: Tuesday: 10.00-11.00

COURSE DESCRIPTION

This is a course to introduce undergraduate students how to conduct their own quantitative research. The course discusses quantitative data analysis methods. The course includes descriptive statistics, data visualization, normal distributions, standard scores, hypothesis testing, correlation, regression, t-test and ANOVA. The course has both theoretical and conceptual parts as well as computer application components. SPSS is the primary software of the course whereas JASP and R software are introduced simultaneously.

COURSE OBJECTIVES

By the end of the semester, students will be able to:
Identify the types of statistical analysis according to a research question.
Conduct and report descriptive statistics.
Calculate standard scores.
Conduct and report correlational studies.
Conduct and report t-test.
Conduct and report one-way ANOVA.

TEXTBOOKS

Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. London: Sage

Gravetter, F. J., & Wallnau, L. B. (2017). *Statistics for The Behavioral Sciences*. Boston: Cengage Learning

SUGGESTED BOOKS

Aydin, B., Algina, J., Leite, W. L., & Atilgan, H. (2018). *An R Companion: A Compact Introduction for Social Scientists*. Ankara: ANI Publishing. https://bookdown.org/burak2358/SARP-EN/

Navarro, D.J., Foxcroft, D.R., & Faulkenberry, T.J. (2019). *Learning Statistics with JASP: A Tutorial for Psychology Students and Other Beginners.* https://tomfaulkenberry.github.io/JASPbook/index.html

Pallant, J., 2020. *SPSS survival manual: A step by step guide to data analysis using IBM SPSS*. Routledge.

TENTATIVE COURSE SCHEDULE:

Week	Date	Topic	Reading (Field, 2013)
1	24-25 June 2026	Variable Types and Exploring Data with graphs	Ch1 & Ch4
2	29-30 June 2026	Descriptive Statistics and Normal Distribution	Ch1 & Ch2 & Ch4
2	1-2 July 2026	Standard Scores	Ch2
3	6-7 July 2026	Hypothesis Testing	Ch7
3	8-9 July 2026	Correlation	Ch7
4	13-14 July 2026	Correlation	Ch7
4	16 July 2026	Simple Linear Regression	Ch8
5	20-21 July 2026	Simple Linear Regression **MIDTERM**	
5	22-23 July 2026	Multiple Linear Regression	Ch8
6	27-28 July 2026	Comparing two means	Ch9
6	29-30 July 2026	Comparing two means	Ch9
7	3-4 August 2026	Comparing several means: ANOVA	Ch11
7	5-6 August 2026	Comparing several means: ANOVA	Ch11
8	10-11-12 August 2026	Comparing several means: ANOVA	Ch11

GRADING:

Homework & Quiz: 20%
Midterm Exam: 30%
Final Exam: 40%
Attendance & Participation: 10%

Distribution of Grades	
100–90: AA	74-70: CC
89-85: BA	69-65: DC
84-80: BB	64-60: DD
79-75: CB	59-below: F

COURSE EXPECTATIONS AND POLICIES

- You are expected to follow and use the moodle page of this course. Submit your assignment here even if you will hand in a hardcopy of it.
- ***Late submissions are not accepted.***
- ***Over 56 hours, students who did not attend more than 16 hours will automatically fail. (70%)***

Professionalism
Professional behavior is expected at all times in class and while collaborating outside of class with others to complete work related to the class. Some of these behaviors include:

- Attendance: Attendance to the course is compulsory. Attend all classes as much as possible –do not make medical and other appointments during class time. Arrive on time and do not leave early.
- Punctuality: Assignments are handed in on-time. Type your assignment according to the **APA** writing manual (Be careful to give reference in the text and in the reference list). Submit your assignments in electronic format using the moodle page.
- Participation & Readiness: Check the syllabus weekly to see what is due and what is expected of you. Read weekly reading assignments. Interact with your course instructor and members of class in a positive manner. Cooperate constructively with peers. Be a positive contributor in your group work. Throughout the class time, show enthusiasm on learning activities, provide insights to the class discussion.

Academic Dishonesty
Academic dishonesty on any assignments and tasks cannot be tolerated in this course. Serious acts of academic dishonesty will result in automatic failure of the course. Be aware of **types of academic dishonesty** such as plagiarism, cheating, duplicate submission. **Plagiarism** is the most common type. It is "presenting someone else's work or ideas as your own, with or without their consent, by incorporating it into your work without full acknowledgement. All published and unpublished material, whether in manuscript, printed or electronic form, is covered under this definition. Plagiarism may be intentional or reckless, or unintentional." Check the following addresses for detailed information about plagiarism:
https://www.ox.ac.uk/students/academic/guidance/skills/plagiarism?wssl=1