



**TED UNIVERSITY
DEPARTMENT OF PSYCHOLOGY
COURSE SYLLABUS
SPRING 2023**

Course Information		Instructor Information*	
Course Code:	PSY 308_02	Instructor:	İbrahim Yiğit, Ph.D.
Course Name:	Testing and Measurement in Psychology	Office:	B245
Course Credits:	(2+2+0) 3 Credits/7 ECTS	Office Hours:	via Zoom by appointment
Location:	G112 / G213	Phone:	(312) 585 04 43
Class Hours:	Wed: 12:00 – 14:00 Thu: 09:00 – 11:00	e-mail:	ibrahim.yigit@tedu.edu.tr

*Teaching Assistant(s): Sevi Gizem Zeybek, M.S. | e-mail: sgizem.zeybek@tedu.edu.tr | Office: B243

Course Objectives

The aim of the course is to introduce the basic concepts related with measurement and testing and applications with certain measurement tools. Throughout the course, students will learn the theory and practice necessary for the design, construction, administration, and interpretation of psychological tests as well as a variety of testing materials and questionnaires used in the field of psychology. Specifically, students will not only learn how to assess psychological tests and measures psychometrically (i.e., factor analysis, validity and reliability), but also, more importantly, how to develop (i.e., test construct) and refine their own psychological measure.

Learning Outcomes

Upon successful completion of this course, students will be able to:

1. define basic concepts concerning the nature and meaning of psychological testing and measurement.
2. describe various psychometric concepts (i.e., validity, reliability) related to tests and test construction.
3. examine practices for developing and piloting surveys and psychological tests.
4. demonstrate an understanding of practical details of designing, constructing, and administering psychological measures.
5. apply statistical techniques (i.e., validity, reliability) used in test construction and questionnaire design to real-life data.
6. interpret the results of the statistical analyses conducted.
7. develop proficiency with academic writing with regard to test development in the field of psychology.

Course Textbooks/Materials

Required Textbooks

- Reynolds, C. R., Altmann, R. A., & Allen, D. N. (2021). *Mastering Modern Psychological Testing: Theory and Methods* (Second Edition). Springer.

Supplemental Textbooks

- Cohen, R. J., & Swerdlik, M. (2013). *Psychological Testing and Assessment: An Introduction to Tests and Measurement* (Eighth Edition). McGraw-Hill.
- Osterlind, S.J. (2006). *Modern Measurement: Theory, Principles, and Applications of Mental Appraisal*. Pearson Prentice Hall.



Student Workload

Activities	Workload (hrs.)
Course Readings	40
Debate	15
Lab Applications	15
Lectures	56
Oral Presentation	15
Hands-on Work	10
Research Review	15
Team Meetings	10
Total	176

Planned Learning Activities and Teaching Methods

Learning activities and teaching methods may include the following: (a) brainstorming; (b) collaborating; (c) demonstrating; (d) guest speakers; (e) oral presentations/reports; (f) peer teaching; (g) problem solving; (h) questioning; (i) reading; (j) telling/explaining; (k) video presentations and (l) web searching.

Assessment Methods and Grading

The course grade will be based on the following:

Assessment Method*	Grading Weight (%)
Presentation (Oral/Poster) <i>Research Proposal Presentation</i>	15
Written Project <i>Research Proposal Report</i>	20
Laboratory Work <i>Lab Hours</i>	15
Presentation (Oral/Poster) <i>Final Project Presentation</i>	15
Written Project <i>Final Project Report</i>	35
Total	100

*Grades will be given based on group work. Only lab hours will be graded based on individual work.

Percentage	Letter Grades	Status	Grade Point
90-100	AA	Excellent	4.00
85-89	BA	Good- excellent	3.50
80-84	BB	Good	3.00
75-79	CB	Satisfactory-good	2.50
70-74	CC	Satisfactory	2.00
60-69	DC	Weak- satisfactory	1.50
50-59	DD	Weak	1.00
49 and below	F	Failing	0.00

*The grading system is also available on <https://ipo.tedu.edu.tr/en/ipo/courses-and-grading-0>

Grading System at TED University*

Formation of Groups

Students in the class will divide into groups consisting of 5 or 6 members. Groups will be formed by students, and teaching assistant (TA) will be notified by **March 15, 2023**. The order of the presentation will be randomly determined and announced on Moodle.

IMPORTANT NOTE: Working in teams of 5-6 members each, students will construct a test and examine its psychometric properties through data collection and analysis (using Statistical Package for Social Sciences-

SPSS). Grades will be given based on group work but not individual work. The measure development process requires a lot of group work and activities (e.g., data collection, data entry into SPSS, and conducting statistical analyses). Group members are expected (and encouraged) to share the burden of all tasks or assignments equally and collaborate with each other as much as possible. Grading does not include peer evaluation, but group members are required to report specific contributions of all group members in their final project presentation. **WHEN THE INSTRUCTOR IS NOT CONVINCED ABOUT THE CONTRIBUTION OF SOME GROUP MEMBERS AND/OR WHEN THE MAJORITY OF GROUP MEMBERS CLAIM AND PROVE THAT SOME GROUP MEMBERS DON'T CONTRIBUTE ENOUGH TO GROUP WORK, GRADING MAY BE DONE INDIVIDUALLY.**

Research Proposal Presentation (15%)

In Research Proposal Presentations, groups are expected to present the draft version of their measures. Specifically, the presentation should include the following points:

- (a) a brief theoretical background of the measure development (i.e., the rationale why they aimed to develop the measure)
- (b) an initial item pool with typically 30 or more items, including reverse items (if applicable)
- (c) possible subscales or factors of the measure (if any) and their labels
- (d) determined rating type (e.g., semantic scales, Likert-type scales)
- (e) targeted sample and its characteristics (exclusion and inclusion criteria determined)
- (f) other measures to be used for the validation of the newly developed measure.

The objective of Research Proposal Presentations, immediately before data collection, is to receive feedback from peers and the lecturer with regard to test items (e.g., feasibility and acceptability of the items). Upon feedback received, group members will refine the items of their measure and finalize them to start collecting data for statistical analyses. Grades will be given based on how groups addressed the points above in their presentation. Presentations are expected to be about **25-30 minutes** in length, with 5-10 minutes to follow the presentation for questions. No presentation template will be provided.

Research Proposal Report (20%)

Groups will write a research proposal report for the measure they aim to develop. A template for the proposal report will be available on Moodle. Further, in the second lab hour, TA will discuss research proposal preparation. The deadline for the proposal submission is **May 12, 2023.**

Lab Hour (15%)

Five lab hours (weighting 3% for each) have been planned for this course. In these lab works, students will learn to;

- (a) prepare data for analysis (i.e., data cleaning)
- (b) conduct validity and reliability analyses
- (c) write test items
- (d) collect data
- (e) prepare research proposal and manuscript.

Lab hours will be performed by the TA. **Individual participation in lab work (e.g., activities) will be graded.**

Final Project Presentation (15%)

Groups will make a presentation of their final project, which is expected to be **about 25-30 minutes in length.** Presentations will include the following parts:

- (a) conceptual/theoretical background for the measure/project
- (b) methods, including sample characteristics, measures used, the methodology of data collection, procedures (the process of measure development), and statistical analyses
- (c) results, including information about the factor structure, convergent/divergent validity, discriminant validity (when possible) and reliability
- (d) discussion with possible improvements to the measure, implications, directions for future research, and limitations
- (e) final version of the measure at the end of the presentation
- (f) specific contributions of group members with percentages (who contributed which part?).

Group members decide how much time they allocate to these parts above in their presentation. However, **note that presentations' main focus will be on reporting the results. Thus, especially be clear as possible when delivering your measure results.** No presentation template will be provided.

Final Project Report (35%)

Groups are expected to write a report in APA format (see APA 7th Manual), including Abstract, Introduction, Methods, Results, and Discussion. **A template for the final project report and a guideline for writing the report will be provided by TA in the last lab hour. The due date for this assignment will be announced later on Moodle.**

Weighting of grades for final project reports is as follows: Abstract (5 pts), Introduction (20 pts), Method (15 pts), Results (20 pts), Discussion (25 pts), Structure (5 pts), Grammar (5 pts), and APA (5 pts).

DUE DATES

Group Formation | March 15, 2023

Research Proposal Report | May 12, 2023

Final Project Report | to be announced later

Course Policies

Professionalism

This includes regular attendance in class, timely completion of assignments, and active participation in all activities and discussions.

Plagiarism / Academic Dishonesty

This course adheres to the academic honesty policy. I expect that all work submitted and presented by you will be your own original work and that the contributions of others will be openly acknowledged. Failure to adhere to this policy will result in disciplinary action. For more information:

- a. Plagiarism is a form of dishonesty that occurs when a person passes off someone else's work as his or her own. This can range from failing to cite an author for ideas incorporated into a student's paper to cutting and pasting paragraphs from different websites to handing in a paper downloaded from the internet. All are plagiarism.
- b. All parties to plagiarism are considered equally guilty. If you share your coursework with another student and s/he plagiarizes it, you are considered as guilty as the one who has plagiarized your work since you enabled the plagiarism to take place. Under no circumstances should a student make his/her coursework available to another student unless the instructor gives explicit permission for this to happen. Copying someone's work is an extreme and straightforward act of plagiarism. More commonly, however, students plagiarize without realizing they are doing so. This generally happens when a student fails to acknowledge the source of an idea or phrasing. Avoid plagiarism by citing sources properly! For all rules and requirements of American Psychological Association (APA) citations, please consult the 7th edition of the Publication Manual of the American Psychological Association.
- c. Read the academic honesty contract (<https://student.tedu.edu.tr/en/student/principles-of-academic-integrity>). By signing this contract, you certify that you have read, understood and complied to agree with all rules and regulations of academic honesty.

Cheating

You may neither receive help from nor give help to others during an in-class exam. During exams, you may not leave the room, talk, or use dictionaries, translators, cell phones or programmable calculators. And please keep your eyes on your own work.

Attendance

This course requires your regular participation, attendance, and punctuality. It is expected that you attend the class on a regular basis (**at least 70% of the classes**) and be on time. It is your responsibility to keep in touch with me about emergencies prior to class. The TEDU policy concerning attendance will be followed strictly. Specifically, in this course, **a student who does not show up in 30% of the classes is given FX. Regular attendance does not provide extra points.**

Late Assignment Submission Policy

Each assignment is to be turned in on time. Arrangements for accepting late assignments will be made only in unusual circumstances (e.g., major illness, death of loved one), and only if you are able to provide documentation to support your excuse. In all other cases, there will be a 10% point-reduction per day for late work, and the assignment will not be accepted after three days late.

Class Participation

Class participation is an integral part of this course. Classes may involve watching movies, reading, questioning, discussions/debates, video presentations, field trips, observation, reflection, demonstrating, poster presentations, hands-on work, group work, collaborating, educational games, problem solving, library/web research projects, class presentations, and written assignments.

Class Readings

Please read the assigned readings prior to class so that you may participate fully in the course discussions.

Announcements

All announcements will be made on the Moodle site for this course. It is your responsibility to keep your e-mail address operative all times. Check your e-mails regularly in order to stay informed.

Lecture Schedule (Subject to change)

Date	Topic	Readings
Mar 6-10	Course Introduction & Introduction to Psychological Testing and Measurement	R&A&A Ch.1
Mar 13-17	The Basic Statistics of Measurement A Statistics Refresher	R&A&A Ch.2; C&S Ch.3
Mar 20-24	Reliability	R&A&A Ch.4
Mar 27-31	Validity	R&A&A Ch.5
Apr 3-7	Lab Hour: Data Cleaning; Validity and Reliability Practices (Preparation for Factor Analysis)	
Apr 10-14	Reading Assignment: How to Develop a Psychological Test: A Practical Approach	R&A&A Ch.18
	Process of Item and Test Development I	R&A&A Ch.6
Apr 17-21	Process of Item and Test Development II & Item Analysis	R&A&A Ch.6 & 7
	Lab Hour: Writing Item & Research Proposal Preparation & Data Collection Process (I)	
Apr 24-28	Lab Hour: Writing Item & Research Proposal Preparation & Data Collection Process (II)	R&A&A Ch.18
May 1-5	Research Proposal Presentations	
May 8-12	Introduction to Factor Analysis	
May 15-19	Analyzing Test Project Data (SPSS Applications)	
May 22-26	Lab Hour: Analyzing Test Project Data Practices & Questions	
May 29-Jun 2	Lab Hour: Writing up the Results & Project Manuscript Preparation & Final Questions	
Jun 5-9	Final Project Presentations	