PSY306 SYLLABUS

COURSE NAME:	**Testing and Measurement**			
COURSE NUMBER:	**PSY 306**			
TEACHING PERIOD:	**Fall 2022**			
INSTRUCTOR	Name	Office Hour	Phone	E-mail
	Nebi Sümer	Via email appointment	Int.: 9320	nebisumer@sabanciuniv.edu
ASSISTANT	İpek Güvensoy ipek.güvensoy@sabanciuniv.edu Selen Gönül sgonul@sabanciuniv.edu			
COURSE SCHEDULE & ROOM	**Courses will be fully in-Class this term.** **Tuesday 10: 40 - 12:30, Wed 12:40-13:30. Lab: Wed 13:40-14:30, FASS G030**			
TEXTBOOK	A collection of book chapters will be assigned mainly from Cohen-Swerdlik (2009) Psychological Testing and Assessment: An Introduction to Tests and Measurement, 7th edition. McGraw−Hill Primis.			

COURSE DESCRIPTION

This course covers the fundamental aspects of development, validation, and applications of psychological measures. You will learn about various psychological measures, including some of the intelligence, attitude, and personality measurements, and how to evaluate them. You will also gain practical skills in the development of psychological tests and how to analyze data to assess the psychometric properties of psychological measures. For this purpose, each student will have a computer with statistical software (SPSS & JASP https://jasp-stats.org/ an open source statistical software) and will be asked to run analyses. You will also have the opportunity to refresh your basic statistical skills. More importantly, you will have hands-on experience on how to analyze your own data for psychological assessment. Main topics include study design, descriptive statistics, reliability, validity, item analysis, testing biases, test standardization, and test development.
You will have both lecture and lab sections as specified below.

EXPECTED OUTCOMES

1. Understand and demonstrate basic knowledge of key concepts and approaches in testing and measurement.
2. Demonstrate an understanding of the theory of psychological testing and measurement
3. Develop or adopt a psychological measure and test its basic psychometric quality.
4. Able to use SPSS & JASP as tools for test development and testing its quality (i.e., item selection, reliability, and validity)
5. Able to analyze the data using basic statistics, such as T-test, ANOVA, correlations, and factor analyses.
6. Critically evaluate the existing psychological assessments.
7.

Important Note: Be aware that this course alone will not qualify students to proficiently or ethically administer and interpret psychological tests

COURSE REQURIMENTS & **ASSESSMENT**	
ATTENDANCE, CLASS PARTICIPATION AND BONUS	Attendance is essential for success since the basic skills and knowledge can only be gained by actively attending and having hands-on experiences in the classroom. Therefore, failure to maintain a regular attendance record and to participate in all class discussions may seriously undermine a student's ability to complete the given unit satisfactorily. Those who attend 80% of classes (excluding exams) will get two bonus points added to their course grade. I will also add extra points for those who had an active search and answers for assignments on "mini internet search" that I will ask in the class. Reading the assigned materials is imperative to this course to follow what is covered on a given day and get more out of the lecture. Therefore, I would like every student to attend all classes, read the assigned chapters and/or articles, and prepare critical questions relevant to the covered topics before the lectures. I also would like you to participate in the class discussions and raise questions as much as possible. **PLEASE TURN OFF YOUR MOBILE PHONE DURING THE CLASS.** **THIS WILL ALSO BE A VERY GOOD SELF-REGULATION EXERCISE FOR YOU!**
	The project will involve different stages of test development, from conceptualization and operational definition of the construct to developing items and testing the reliability and validity of the measure. The project will be held during the second half of the semester after you gain basic info about testing and

TEST/SCALE DEVELOPMENT OR ADAPTATION ASSIGNMENT AND PRESENTATION	measurement. You will be required to conduct a study, present your findings in class, and prepare a final report with a classmate. Follow these steps in the test/scale development project. 1. Find your teammate and select a variable (i.e., topic/behavior/attitude/trait/outcome) for which you want to develop a measure/test/scale. 2. As a team, operationally define your variable with a supporting theory or model, and get my approval before beginning to develop or translate your items no later than November 15th, 2022. 3. Open a Google doc document and share it with your member and your assigned TA (either Selen Gönül or İpek Güvensoy) and begin writing items and revising them by consulting TAs and me. 4. Finalize writing your items or translating the items from the original measure. If you adopt a measure into Turkish, follow the translation back-translation procedure. 5. Find validating measure(s) to compare and assess the validity of your measure. You will learn what validation means and why we need to assess the validity of your measure in class. 6. Design a study and collect data online from at least 50 participants. More information on how to collect data online will be provided later. 7. Analyze your data as explained in lectures. That is; 8. Make sure that reverse items are recorded. 9. Conduct a factor analysis to examine the factor structure of your measure & report your findings 10. For reliability, examine Cronbach's Alpha or other related reliability indicators to ensure that all items tap into the same construct (i.e., internally consistent). 11. Compute the variables of interest and report descriptive statistics of your variables. 12. For validity, report the correlations of your measure with the established measure. 13. Submit your final report on January 6th, 2023, at 5:00 pm. Late submissions will not be accepted. 14. The final report should be between 1800-2500 words, excluding tables, figures, references, and appendices using the APA style, and it should include the following sections: 15. The title page includes the title of your project (e.g., Development/Adaptation of a Computer Efficacy Measure for Adults), contributors' names, course name, instructor's name, and dates. 16. Abstract (100-120 words) 17. Introduction - A brief review of the literature on the variables of interest and their measurement, ending with the project's purpose. 18. Method - Including participants, measures, and procedure subheadings. 19. Results - Descriptive statistics, factor analysis, reliability, and validity analyses. 20. Discussion 21. References

	22. Appendices - The final version of the scale developed by your team, other scales/tests used for validation purposes, and the original version of the scale (if scale adaptation is carried out). 23. Present your findings to your teammate in 15 minutes. This project constitutes 35% of your overall grade in this course. This 35 percent will come from the final report (25%) and presentation performance (10%). **Note:** Make sure you start your project promptly and fully comprehend the steps to be followed. Ask TAs and me if anything is unclear to you.
ASSIGNMENTS	You will have six in-class or take-home assignments about analyzing data and testing the psychometric quality of measures. You will receive data files via email and open the file before class starts. Each assignment will be worth 3 points, and the one with the lowest score (or missing one) will be excluded.
EXAMS	You will have **midterm and final exams.** Both exams will be in the essay format, including conceptual questions and interpreting statistical outputs.
RESEARCH PARTICIPATION AS BONUS	This involves participating in research projects as participants via the SONA system. Each one will be worth 0.5 points, and you can have a maximum of 3 points (bonus) for research participation.
ACADEMIC RULES AND INTEGRITY	Please familiarize yourself with Sabancı University's rules and regulations. Read the documents on the following web pages: https://www.sabanciuniv.edu/en/academic-integrity-statement ***I have a zero-tolerance policy for cheating, and all ethical violations will result in failure of the course in addition to other substantial penalties. If you have any doubts or questions about what constitutes academic misconduct, please do not hesitate to contact me.***
Summary of Grading:	1. Test/scale development 35 2. Assignments 15 3. Midterm 25 4. Final 25 5. Attendance/Participation 2 7. Research participation 3 TOTAL 105 (5 points as a bonus, see the grading scale below) Note: Course content, requirements, and policies are subject to change at the discretion of the instructor

WEEK	SCHEDULE
Week 01 **4-5.10.2022**	Get to know each other and introduction to Testing and Measurement Syllabus Overview. Introduction to Psychological Testing and Assessment. Psychological testing vs. assessment. Who, Why, and Where? Historical, Cultural, And Legal/Ethical Considerations and separating science from pseudoscience. Chapters 1 & 2. 1. Psychological Testing and Assessment 2. Historical, Cultural, and Legal/Ethical Considerations.
Week 02 **11-12.10.2022**	Statistical Refreshment and Reviewing the basics of SPSS: Data entry and descriptive analyses I Chapter 3: A statistical Refresher
Week 03 **18-19.10.2022**	Cont. Statistical Refreshment and Reviewing the basics of SPSS: Data entry and analyses II Chapter 3: A statistical Refresher **Assignment 1**
Week 04 **25-26.10.2022**	Chapter 4: Tests and Testing Scoring scales, and performance tests **Assignment 2:** Scale and test scoring, computing variables, reversing items. Etc.
Week 05 **1-2.11.2022**	Chapter 5. Reliability and calculating different types of reliability, Calculating Cronbach's Alpha and inter-rater reliability.
Week 06 **8-9.11.2022**	Types of Validity and Correlational analyses of validity Chapter 6. Validity

	Chapter 7. Utility **Assignment 3**
Week 07 **09-10.11.2022**	Simms_2008_Classical and Modern Methods of Psychological Scale Construction Chapter 8. Test Development and item construction **Assignment 4**
Week 08 **15-16.11.2022**	Test Dimensionality and Factor Analysis with SPSS **MIDTREM (**16.11.2022 / 12.40 -14.30)
Week 09 **22-23.11.2022**	**Assignment 5:** Validation of a survey. Factor analysis. Test development project. Operational definitions & Constructs and constructing items.
Week 10 **29-30.11.2022**	Chapter 9. Intelligence and Its Measurement Finalizing item development and formatting Norm- and Criterion-Referenced Tests. Nomothetic vs. idiographic approach. Applications of Assessment.
Week 11 **06-07.12.2022**	**Assignment 6. Factor analyses** Chapter 12. Personality Assessment: An Overview Begin collecting data for your test/scale
Week 12 **13-14.12.2022**	REVIEW ON SCALE CONSTRUCTION AND PRESENTATION OF THE PROJECT DRAFTS
Week 13 **20-21.12.2022**	Response Biases and Testing Response bias
Week 14 **27-28.12.2022**	**PRESENTATIONS OF THE TEST DEVELOPMENT PROJECTS I**
Week 15 **3-4-.01.2021**	**PRESENTATIONS OF THE TEST DEVELOPMENT PROJECTS II**

A	90-100
A-	85-89.99
B+	80-84.99
B	75-79.99
B-	70-74.99
C+	65-69.99
C	60-64.99
C-	55-59.99
D+	50-54.99
D	45-49.99
F	0-44.99