

General information	Name, code and number of credits	EDU590, Scientific Research Practice (SRP), 6 ECTS
	Department	Education
	Program (bachelors, master)	Master's
	Semester	Spring 2026
	Subject teacher (s)	Prof. Dr. Engin Karadağ
	E-mail:	engin.karadag@khazar.org
	Phone:	-
	Lecture room	Tuesday online
	Advice hours	By appointment (email)
Prerequisites	Research methods	
Language of instruction	English	
Type of subject (compulsory/ elective)	Compulsory	
Resources	<p>Required / recommended resources:</p> <ul style="list-style-type: none"> – Creswell, J. W., & Creswell, J. D. (2018). Research Design (5th ed.). SAGE. – Bryman, A. (2016). Social Research Methods (5th ed.). Oxford University Press. – Yin, R. K. (2018). Case Study Research and Applications (6th ed.). SAGE. – Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). Qualitative Data Analysis (3rd ed.). SAGE. – Field, A. (2018). Discovering Statistics Using IBM SPSS Statistics (5th ed.). SAGE. – American Psychological Association. (2020). Publication Manual of the APA (7th ed.). 	
Course description	<p>This course provides intensive training in scientific research practice with a focus on social science research methods. Students will learn how to formulate research problems, conduct literature reviews, choose appropriate research designs (quantitative, qualitative, and mixed methods), collect and analyze data, and report findings ethically and in academic formats (APA 7). The course is practice-oriented and supports the development of a high-quality dissertation proposal and a pilot study.</p>	
Course objectives	<p>By the end of the course, students will be able to:</p> <ol style="list-style-type: none"> 1. Develop a clear research problem, aim, and research questions/hypotheses. 	

	<ol style="list-style-type: none"> 2. Conduct a systematic literature review and build a conceptual/theoretical framework. 3. Select and justify an appropriate research design and methods. 4. Prepare research instruments and data-collection protocols. 5. Apply basic quantitative and qualitative analysis procedures. 6. Follow research ethics, integrity, and APA 7 reporting standards. 7. Produce a dissertation-ready proposal including a feasible timeline and limitations. 		
Learning outcomes	<p>After completing the course, students will be able to:</p> <ul style="list-style-type: none"> – Differentiate major research paradigms and designs used in social sciences. – Operationalize constructs and define variables/indicators. – Design sampling strategies and address validity, reliability, and trustworthiness. – Use basic descriptive and inferential statistics (as appropriate) and interpret outputs. – Code qualitative data, develop categories/themes, and present evidence. – Write a coherent academic report/proposal following APA 7 and ethical requirements. 		
Teaching methods	Presentation	✓	
	Group discussion	✓	
	Practical assignments	✓	
	Projects	✓	
Assessment	Components	Date/deadline	Percentage (%)
	Assignments	Weeks 2-14	5
	Active participation	Weeks 1-15	5
	Quiz	Weeks 4, 6, 10, 12	5
	Group projects	Weeks 8-13	15
	Midterm exam	April 2026	30
	Final exam	June 2026	40
	Total		100
Rules (Teaching policy and behaviour)	<p>Attendance is expected and active participation is required. Students are responsible for preparing assigned readings/materials and contributing respectfully to discussions in both classroom and online settings. All written and oral work must comply with academic integrity principles (no plagiarism, correct referencing, and transparent disclosure of any tools used). Late submissions may be penalized unless prior arrangements are made and documented.</p> <p>Students are expected to follow professional etiquette and confidentiality, particularly when discussing research participants, institutions, or field sites.</p>		

Where applicable, ethical approval and relevant permissions must be secured before data collection; work that does not follow ethical procedures may not be evaluated.

Assessment is based on (i) evidence of conceptual understanding, (ii) quality of reasoning and academic argumentation, (iii) appropriate and transparent use of sources and tools, and (iv) adherence to ethical and integrity standards. Clarity, structure, and academic writing conventions (e.g., citation style, coherence, and precision) are also considered across all tasks. Assignments are designed to develop academic writing and applied research skills through structured tasks (e.g., critique, synthesis, proposal writing). Submissions should demonstrate a clear argument supported by credible sources, with proper citation and transparent tool use. Students are encouraged to consult the rubric and seek feedback early to improve draft quality.

Quizzes assess understanding of key concepts, terminology, and methodological principles covered in readings and lectures. They may include short-answer and scenario-based items that evaluate reasoning rather than memorization. Regular review of weekly materials is the most effective preparation strategy.

The group project evaluates collaborative research planning and problem-solving, including role distribution, decision-making, and integration of evidence. Each group must document contributions and ensure academic integrity, ethical compliance, and consistent quality across sections. Peer assessment or contribution logs may be used to ensure fair grading.

Tentative schedule

Week	Date	Topics to be covered	Tasks/Resources
1.		Course overview; research in social sciences; ethics & academic integrity; research paradigms	Read: Creswell & Creswell ch.1-2; APA 7 basics. Task: Identify a broad topic and ethical considerations.
2.		From topic to problem statement; aims, objectives; research questions & hypotheses	Read: Creswell ch.3. Task: Draft problem statement + 3 research questions (1 page).
3.		Literature review: search strategies, databases, keywords; synthesizing evidence	Workshop: search strings; citation manager. Task: Annotated bibliography (8-10 sources).
4.		Conceptual/theoretical framework; constructs, variables, operational definitions	Read: Bryman relevant chapter. Task: Draft conceptual model + key definitions.
5.		Research designs I: quantitative designs; sampling; validity, reliability; measurement issues	Read: Field (intro) + Creswell quantitative sections. Task:

			Sampling plan + instrument outline.
6.		Questionnaire and scale development; pilot testing; data collection planning	Task: Create a short survey (10-15 items) and pilot plan; bring draft to class.
7.		Research designs II: qualitative approaches (case study, phenomenology, grounded theory); interviewing & observation	Read: Yin (case study) or Miles et al. Task: Draft interview protocol (8-10 questions).
Midterm			
8.		Qualitative data analysis: coding, categories/themes; using evidence; basic trustworthiness strategies	Workshop: coding exercise. Task: Code a short transcript and write a 1-page thematic summary.
9.		Mixed methods research: rationales; convergent/explanatory/exploratory designs; integration	Read: Creswell mixed methods section. Task: Choose a mixed-methods option (or justify single method).
10.		Quantitative analysis I: data screening; descriptive statistics; visualization; interpretation	Lab: SPSS/Excel practice. Task: Descriptives and interpretation note (provided dataset).
11.		Quantitative analysis II: group comparisons (t-test/ANOVA); effect sizes; reporting	Lab: practice outputs. Task: Short results write-up in APA style (tables/figures).
12.		Quantitative analysis III: correlation and regression basics; assumptions; interpretation	Lab: regression demo. Task: Regression interpretation worksheet.
13.		Quality in research: triangulation; bias; reflexivity; limitations; research ethics in fieldwork	Task: Write limitations + quality strategies section for your proposal.
14.		Academic writing: structure of proposals; results/discussion style; APA 7 referencing; plagiarism prevention	Task: Submit full draft proposal (sections 1-4). Peer review in class.
15.		Student proposal presentations; feedback; final revisions and submission guidance	Final project: Present proposal (10 min). Submit revised final proposal.
Final exam			