# Course Syllabus

## Research Methods with AI Prompts to Boost Productivity

**Course Instructor:** Kairat Moldashev
**Duration:** 6 hours

**Format:** 5 parts (modules)
**Each part includes:** 1 video + post(s) + 10-question quiz
**Outcome:** A faster, more rigorous research workflow ethically using AI prompting

## Course description

Learn how to use AI prompts responsibly to boost productivity across the research process, from finding a publishable gap and choosing methodology to writing results, discussion, and preparing a paper for submission. You will focus on structured prompting, verification habits, and clear academic writing.

## Learning outcomes

**By the end, you can:**

- Identify a research gap and craft a strong research question
- Build a PCC + Boolean search strategy and a source-summary file
- Choose quantitative, qualitative, or mixed methods that fit your research question
- Design a quantitative study (variables, hypotheses, reliability, validity)
- Design a qualitative study (theory lens, interview guide, thematic analysis, trustworthiness)
- Write Results, Discussion, and Conclusion with journal-ready structure
- Use AI ethically, verify outputs, protect confidentiality, and disclose AI use

# Course modules

| Module | Content |
| --- | --- |
| Part 1: Research gap and questions | How platform works, IMRAD logic, novelty and gap-finding, PCC search, summary database, AI ethics |
| Part 2: Methodology | Choosing approach and design, mixed methods patterns, literature review vs theoretical framework, using master prompts to refine design. |
| Part 3: Quantitative approach | Variables and measures, hypothesis development, survey design, reliability and validity, AI + Python workflow overview |
| Part 4: Qualitative approach | Theory as a lens, interview guides and probes, trustworthiness, thematic analysis, triangulation, confidentiality with AI-assisted coding. |
| Part 5: Discussing findings and publishing | Quant and qual results writing, discussion that links to literature, contributions, limitations, conclusion, citation checks, journal selection, AI disclosure. |

# Assessment

- 5 quizzes (one per part)
- 80% to pass
- Certificate upon completion

# Course policies

Responsible AI use

- Treat AI output as provisional. Verify claims using authoritative sources.
- Do not upload confidential, sensitive, or identifiable participant data to AI tools. De-identify transcripts and notes.
- Disclose AI use according to your institution or target journal requirements.

Academic integrity

- Learners remain responsible for originality, accuracy, and proper citation.
- AI must not be used to fabricate sources, data, or quotations.