

## Program content & schedule

This course will provide participants with foundational knowledge and skills for applying social science research methods to educational issues in medicine and health care. Through lectures, discussion, practice and projects, you will gain familiarity with a range of social and behavioral approaches to studying medical education and evaluating educational and behavioral interventions, with an emphasis on survey, interview, and focus group methods.

### A Series 2023-2024

#### MODULE A1: INTRODUCTION TO EDUCATIONAL RESEARCH DESIGN

1. (9/21/23) Getting started: Formulating research questions, deciding on quantitative, qualitative, or mixed methods
2. (10/5/23) Educational research design, constructs, and outcome measures
3. (10/19/23) Identifying suitable quantitative and qualitative methods: Developing a study design to answer your research questions

#### MODULE A2: SURVEY DESIGN & IMPLEMENTATION

4. (11/16/23) Fundamentals of survey design: Steps in survey development, survey items, response types, measuring knowledge/attitudes/skills/behaviors
5. (11/30/23) Evidence-based survey practices: Survey flow, sampling, cognitive interviewing & pilot testing
6. (12/07/23) Sources of bias in survey research; threats to validity; survey implementation & optimizing response rates

#### MODULE A3: SURVEY DATA ANALYSIS & REPORTING

7. (1/18/23) Statistics 101: Variable types, analyzing survey data using statistical software
8. (2/1/24) Statistics 101: Descriptive statistics, power & sample size determination, reporting results

#### MODULE A4: QUALITATIVE RESEARCH DESIGN, IMPLEMENTATION, ANALYSIS, & REPORTING

9. (2/15/24) Overview of different qualitative approaches in education research: grounded theory, phenomenology, ethnography, narrative approaches, case studies, participatory action research
10. (3/7/24) Interview and focus groups; developing interview guides, conducting interviews & focus groups
11. (3/21/24) Choosing your analytic method for interview/focus group data; introduction to content & thematic analysis, deductive vs inductive coding
12. (4/4/24) Qualitative validity and trustworthiness, writing up your qualitative analysis using reporting guidelines

#### MODULE A5: EDUCATIONAL LEARNING THEORIES & NEW METHODS

13. (5/2/24) Clinical reasoning skills and metacognition research
14. (5/16/24) Learning with others: Learning environment research and social approaches to learning theories
15. (6/6/24) Using AI in educational research and methods

### "B" Series 2024-2025

#### MODULE 1: MASTERING THE BASICS: Searching & appraising the literature; institutional approval and participant consent

1. (9/2024) Connecting with the literature: What has already been done?
2. (9/2024) Journal club: How do I know the results are valid?
3. (10/2024) Protecting our research participants: What approvals do I need for my study? How do I ensure human subjects protection?

#### MODULE 2: WHEN, WHY, AND HOW TO USE CONSENSUS METHODS

4. (11/2024) Delphi Process: Conducting consensus research
5. (12/2024) Case study: Design, data collection, and analysis of data for a Delphi study

#### MODULE 3: INCORPORATING THEORY INTO YOUR RESEARCH

6. (1/2025) Getting started with understanding theories: what are they and why are they important?
7. (1/2025) Incorporating some theoretical models into your study design and manuscript: Hands-on practice

#### MODULE 4: MIXED METHODS: How to combine qualitative and quantitative methods into your study

8. (1/2025) Overview of mixed methods, review of quantitative (e.g. surveys) and qualitative (e.g. focus groups) approaches
9. (2/2025) Mixed Methods: Concurrent & sequential designs, analyzing mixed methods data
10. (2/2025) Observation research

#### MODULE 5: CURRICULUM DEVELOPMENT & EVALUATION

11. (3/2025) Curriculum development & developing an online curriculum
12. (3/2025) Curriculum and course evaluation
13. (4/2025) Optimizing simulation environment for research

#### MODULE 6: PRESENTING AND COMMUNICATING YOUR WORK

14. (5/2025) Manuscript writing & where to publish
15. (5/2025) IMRaD basics Part 1: Essentials for Introduction, Methods, Results, and Discussion sections
16. (6/2025) IMRaD basics Part 2: Telling a story, making an argument: crafting a manuscript for coherence & flow