

Educational Research Methods & Analysis - ERMA

Courses

ERMA 2400 APPLIED QUANTITATIVE DATA ANALYSIS IN EDUCATION AND HEALTH PROFESSIONS (3) LEC. 3. This course provides undergraduate students who are interested in education, counseling, school psychology, or health professions with data management, data analysis reasoning, and data-based decision-making skills.

ERMA 4330 INTRODUCTION TO SPORTS ANALYTICS (3) LEC. 3. Pr. MATH 1100 or MATH 1120 or MATH 1123 or MATH 1130 or MATH 1133 or MATH 1150 or MATH 1153 or MATH 1610 or MATH 1613 or MATH 1617 or MATH 1680 or MATH 1683. This course provides an introduction to the field of sports analytics, which is the use of scientific techniques to model sports performance. This course will introduce students to individual and team performance measures, their interpretation and basic analyses using those measures.

ERMA 7100 ADVANCED STUDY OF EDUCATIONAL MEASUREMENT AND EVALUATION (3) LEC. 3. Educational measurement and evaluation with special emphasis on uses of measurement data such as standardized testing and emerging evaluation models such as alternative and authentic assessment.

ERMA 7110 EDUCATIONAL PSYCHOLOGY AND ASSESSMENT (3) LEC. 3. Study of educational psychology as it applies to understanding the teaching-learning process. Measurement and evaluation skills will also be covered.

ERMA 7200 BASIC METHODS IN EDUCATION RESEARCH (3) LEC. 3. Major modes of inquiry in contemporary educational research including experimental, casual comparative, descriptive, qualitative inquiry, and action research models.

ERMA 7210 THEORY AND METHODOLOGY OF QUALITATIVE RESEARCH (3) LEC. 3. Major modes of qualitative research, their underlying philosophical assumptions about knowledge, and the major strategies for collecting and analyzing relevant data.

ERMA 7220 APPLIED QUALITATIVE RESEARCH (3) LEC. 3. Pr. ERMA 7210 or ERMA 7216 or FOUN 7210. Study of detailed strategies of data collection, principles of observation, interviewing, focus groups, recording and coding data, triangulation, strategies for analyzing coded data, and writing up of one's findings.

ERMA 7230 WRITING AS INQUIRY IN QUALITATIVE RESEARCH (3) LEC. 3. Pr. ERMA 7210 or ERMA 7216. This course is based on the assumption that qualitative researchers learn their trade through both scholarship (i.e., deskwork) and firsthand experience (i.e., fieldwork). We take away lessons from doing our own research and from the research experiences of others. For this reason, the course has three aims: to hone your skills reading methodological and empirical literature; to experiment with analysis via writing, including crafting reports of findings and other pieces of writing; and to reflect meaningfully on these processes, including their theoretical, methodological, and ethical dimensions.

ERMA 7240 THINKING WITH THEORY IN QUALITATIVE RESEARCH (3) LEC. 3. Pr. ERMA 7210 or ERMA 7216. This course is designed to give an overview and introduction to a variety of theorists and theoretical approaches that are often used in qualitative inquiry. We will compare and contrast the assumptions, design, and methods of different philosophies and theories in qualitative research.

ERMA 7300 DESIGN AND ANALYSIS IN EDUCATION I (3) LEC. 3. Departmental approval. Basic methods of inferential analysis including t-tests, between and within subjects ANOVA, mixed ANOVAs and hierarchical designs as they are utilized in educational research.

ERMA 7310 DESIGN AND ANALYSIS IN EDUCATION II (3) LEC. 3. Pr. (FOUN 7300 or ERMA 7300) or (FOUN 7306 or ERMA 7306). Bivariate and multiple correlation and regression analysis, trend analysis, analysis of covariance, and logistic regression, as they are utilized in educational research. Departmental approval. May count either ERMA 7310 or ERMA 7316.

ERMA 7320 APPLIED QUANTITATIVE RESEARCH (3) LEC. 3. Pr. (ERMA 7200 or ERMA 7206 or FOUN 7200 or FOUN 7206) and (ERMA 7300 or ERMA 7306 or FOUN 7300 or FOUN 7306). The study and application of detailed strategies of research study designs, data collection, analysis, and reporting of quantitative data. Course may be repeated for a maximum of 6 credit hours.

ERMA 7400 MIXED METHODS RESEARCH (3) LEC. 3. Pr. ERMA 7200 or ERMA 7206 or ERMA 7210 or ERMA 7216 or ERMA 7300 or ERMA 7306. Overview and introduction to the use of mixed methods research in the social and behavioral sciences.

ERMA 7410 RESEARCH METHODS FOR SOCIAL JUSTICE AND EQUITY (3) LEC. 3. Pr. ERMA 7300 or ERMA 7306 or ERMA 7210 or ERMA 7216 or ERMA 7400. This course focuses on critical educational research in the scholar-activist model. Through engaging with critical theoretical frameworks, critical empirical research, and research methods, this course prepares students to produce research and scholarship for social justice and equity in education.

ERMA 7900 DIRECTED STUDIES (1-6) IND. SU. Special study in which the student's learning efforts are guided toward desired objectives. Course may be repeated for a maximum of 6 credit hours.

ERMA 7910 PRACTICUM IN EDUCATIONAL RESEARCH, MEASUREMENT, AND EVALUATION (1-3) LEC. 1-3. SU. Pr. (ERMA 7210 or ERMA 7216) and (ERMA 7300 or ERMA 7306). Supervised experience related to area of specialization within educational research, measurement, and evaluation. Course may be repeated for a maximum of 6 credit hours.

ERMA 7970 SPECIAL TOPICS IN EDUCATION RESEARCH METHODS & ASSESSMENT (1-6) DSL/LEC. Consideration of historical, philosophical, social, psychological, measurement, statistics or research issues, and their impact on education. Course may be with a change in topic. Course may be repeated with change in topics.

ERMA 8100 PROGRAM EVALUATION (3) LEC. 3. Study of various theories and models of curriculum evaluation, methodological issues regarding planning and conducting evaluation studies, reporting and using information from evaluation.

ERMA 8120 TEACHER EVALUATION (3) LEC. 3. Analysis of research on teaching, classroom observation methods, teaching portfolios, supervision of teachers, license and certification assessment, ethical and legal consideration, and using information to improve teaching.

ERMA 8200 SURVEY RESEARCH METHODS (3) LEC. 3. Overview of survey research, sampling issues, selection and construction of survey instruments, response effects, issues influencing response rate, reliability and validity of survey data, and analysis of survey data.

ERMA 8210 PREP RESEARCH FOR PUBLICATION (3) LEC. 3. SU. Pr. (ERMA 7300 or ERMA 7306) and (ERMA 7310 or ERMA 7316) and (ERMA 7210 or FOUN 7210 or FOUN 7300 or FOUN 7306 or FOUN 7310 or FOUN 7316). Preparation of graduate student research for publication or presentation at professional conference through practice, group discussions, peer review and feedback from experienced editorial board members. May count either ERMA 8210 or ERMA 8216.

ERMA 8320 DESIGN AND ANALYSIS IN EDUCATION III (3) LEC. 3. Pr. (FOUN 7310 or ERMA 7310) or (ERMA 7316 or FOUN 7316). Departmental approval. Discriminate analysis, MANOVA, canonical correlation, path analysis, exploratory and confirmatory factor analysis, and hierarchical linear modeling as they are utilized in educational research.

ERMA 8330 NON-PARAMETRIC DATA ANALYSIS IN EDUCATION RESEARCH (3) LEC. 3. Pr. FOUN 7300 or FOUN 7306 or ERMA 7300 or ERMA 7306. Departmental approval. Common non-parametric statistical tests appropriate for use with nominal and ordinal data in educational applications. These include rank-order correlation, sign tests, median tests, analysis of variance of ranks and log-linear analysis.

ERMA 8340 A PRACTICAL INTRODUCTION TO STRUCTURAL EQUATION MODELING (3) LEC. 3. Pr. (FOUN 8320 or ERMA 8320 or ERMA 8326). Departmental approval. Theory and practice of structural equation modeling techniques as they are utilized in educational research will be developed by expanding concepts of multiple linear regression and exploratory factor analysis to allow for correlation and causally related latent constructs.

ERMA 8350 ADVANCED MEASUREMENT THEORY (3) LEC. 3. Pr. (FOUN 7300 or ERMA 7300 or ERMA 7306 or FOUN 7306) and (FOUN 7310 or ERMA 7310 or FOUN 7316 or ERMA 7316). Introduction to classical and modern (IRT) test theory, measurement properties, differential item functioning, standard and adaptive testing.

ERMA 8990 RESEARCH AND DISSERTATION (1-10) DSL/DSR. Individualized support and direction for students writing their dissertations. Course may be repeated with change in topics.