

RESEARCH AND EVALUATION METHODS

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Overview

The MA in Research and Evaluation Methods (REM) degree prepares students to lead in professional practice in the following responsibilities:

1. interpreting, analyzing, and applying research in educational settings;
2. applying knowledge about research methods, statistics, and measurement; and
3. applying inquiry skills and creative thought in solving practice-based problems.

Graduates of the program typically work in school district research/assessment departments, state or federal government agencies, research and evaluation firms, non-profit organizations, or companies that have data/research offices.

Students acquire the skills necessary for a variety of roles in educational and teaching settings or community environments where knowledge of learning, development, assessment, and research is essential. Many of our graduates also seek this MA as preparation for advanced study in educational psychology, assessment, research methods, and related fields.

Programs

- Research and Evaluation Methods, MA (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/school-education-human-development/research-evaluation-methods/research-evaluation-methods-ma/>)
- Applied Measurement Certificate (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/school-education-human-development/research-evaluation-methods/applied-measurement-certificate/>)
- Applied Statistical Modeling Certificate (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/school-education-human-development/research-evaluation-methods/applied-statistical-modeling-certificate/>)
- Classroom Assessment Certificate (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/school-education-human-development/research-evaluation-methods/classroom-assessment-certificate/>)
- Culturally Responsive Methods Certificate (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/school-education-human-development/research-evaluation-methods/culturally-responsive-methods-certificate/>)
- Program Evaluation Certificate (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/school-education-human-development/research-evaluation-methods/program-evaluation-certificate/>)
- Qualitative Methods and Analysis Certificate (<http://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/school-education-human-development/research-evaluation-methods/qualitative-methods-analysis-certificate/>)

[departments/school-education-human-development/research-evaluation-methods/qualitative-methods-analysis-certificate/](https://catalog.ucdenver.edu/cu-denver/graduate/schools-colleges-departments/school-education-human-development/research-evaluation-methods/qualitative-methods-analysis-certificate/))

Faculty

Professor:

Nancy Leech, PhD, Colorado State University

Associate Professor:

Kent Seidel, PhD, University of Cincinnati

Assistant Professor:

Courtney Donovan, PhD, University of Denver

Research and Evaluation Methods (RSEM) Courses

RSEM 5001 - Special Topics (3 Credits)

Specific topics vary from semester to semester. Cross-listed with RSEM 4001. Max hours: 3 Credits.

Grading Basis: Letter Grade

RSEM 5050 - Classroom Assessment (3 Credits)

This course strengthens educator classroom assessment practice. It provides students with a foundational understanding of quality measurement practices to support evaluation of assessment instruments and tasks, determination of appropriate scoring approaches, and interpretation of state and district assessment results. It also deepens students' formative assessment practice supported by practical strategies and tools. Finally, it facilitates student integration of formative and summative uses of assessment with instruction and planning.

Repeatable. Max Hours: 6 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 6.

RSEM 5080 - Research In Schools (3 Credits)

Provides teachers with the competencies necessary for examining their professional experiences using formal and informal methods of inquiry. Teachers become more reflective practitioners who investigate questions that arise from their work in schools. The course also prepares teachers to critique published research in a thoughtful manner. The intended audience for the course is beginning and experienced P-12 teachers.

Repeatable. Max Hours: 6 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 6.

RSEM 5100 - Basic Statistics (3 Credits)

A first-level course on the use and interpretation of descriptive and inferential statistics. Topics covered include: frequency distributions, measures of central tendency and measures of variability; shapes of distributions; standard scores; scattergrams, correlation and regression; and t-tests. Repeatable. Max Hours: 6 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 6.

RSEM 5110 - Introduction to Measurement (3 Credits)

A first-level course that examines the nature and purpose of psychological measurement. Particular attention is paid to the concepts of reliability, validity, norms, interpretation of scores, response sets, fairness in testing, and norm-referenced vs. criterion-referenced interpretation of scores. A variety of instruments that are used to measure human attributes and behaviors are studied. Repeatable. Max Hours: 6 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 6.

RSEM 5120 - Introduction to Research Methods (3 Credits)

This is a survey course that examines the purposes of research, the methods of quantitative, qualitative, and mixed research, and the processes involved in research studies. The primary aims of this course are to improve your skills as an informed consumer of research and to provide you with the skills to conduct your own research. Cross-listed with RSEM 4120. Max hours: 3 Credits.

Grading Basis: Letter Grade

RSEM 5600 - Issues in Assessment Development (3 Credits)

This is the first course of a three#course series for a Classroom Assessment Certificate. The course focuses on developing the conceptual knowledge and technical skills required to help K#12 practitioners to develop valid, reliable, and fair assessment of student learning. Max hours: 3 Credits.

Grading Basis: Letter Grade

RSEM 5610 - Formative and Summative Assessment in the Classroom (3 Credits)

This is the second course of a three#course series for a Classroom Assessment Certificate. The course focuses on developing conceptual knowledge and technical skills required to develop and implement formative and summative assessments to support student learning. Prereq: RSEM 5600. Max hours: 3 Credits.

Grading Basis: Letter Grade

Prereq: RSEM 5600

RSEM 5620 - Analyzing, Using, and Reporting Assessment Results (3 Credits)

This is the third course of a three#course series for a Classroom Assessment Certificate. The course focuses on developing conceptual knowledge and technical skills required to develop and implement formative and summative assessments to support student learning. Prereq: RSEM 5610. Max hours: 3 Credits.

Grading Basis: Letter Grade

Prereq: RSEM 5610

RSEM 5800 - Workshop: Topics in Research and Evaluation Methodology (1-4 Credits)

Topics and credit hours vary from term to term. Often workshops address a current topic in research, evaluation, or measurement by considering its scholarly foundations and its application to schools and other educational settings. Repeatable. Max Hours: 12 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 12.

RSEM 5840 - Independent Study: RSEM (1-4 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

RSEM 5910 - Practicum in Research and Evaluation Methodology (1-4 Credits)

Supervised work in projects that provide experience in data analysis, research, measurement, or evaluation. Requires a minimum of 75, 150, 225, or 300 clock hours under supervision (for 1, 2, 3, or 4 credit hours, respectively). Repeatable. Max hours: 8 Credits.

Grading Basis: Letter Grade with IP

Repeatable. Max Credits: 8.

RSEM 6050 - Seminar in Assessment Policy Issues (3 Credits)

Three public policy issues involving educational assessment are analyzed. The policy issues selected vary to reflect current policy debates. Sample issues are school accountability, grading and report cards, performance-based graduation standards, classification of students as having special needs, merit pay for teachers, and retaining students in grade. Each analysis examines (a) policy history; (b) value assumptions and constituency interests; (c) validity of assessment procedures; and (d) consequences of policy alternatives. Prereq: RSEM 5050 or RSEM 5110. Repeatable. Max Hours: 6 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 6.

Prereq: RSEM 5050 or RSEM 5110

RSEM 6200 - Single Case Research Design for Education (3 Credits)

This course provides an overview of Single Case research Design (SCRD) within educational settings. The course will describe single case designs (SCD), specify the types of questions that SCD's are designed to answer, discuss the internal and external validity of SCD's, outline SCD standards, and describe implementation of different SCRD's. Max hours: 3 Credits.

Grading Basis: Letter Grade

RSEM 6500 - Teacher as Researcher (3 Credits)

Taken concurrently with Contextual Curriculum II, this course provides opportunities to engage in inquiry while analyzing professional experiences within their classroom context, sharing data/results from an action research project and critiquing and synthesizing published educational research. Max Hours: 3 Credits.

Grading Basis: Letter Grade

RSEM 6700 - Data Manipulation and Visualization (3 Credits)

This course will prepare students to query, analyze, and manipulate data organized in relational databases using Structured Query Language (SQL) and to present data effectively using dashboard software (such as Tableau or Power BI) to create interactive visualizations, including data dashboards. Max hours: 3 Credits.

Grading Basis: Letter Grade

RSEM 6950 - Master's Thesis (1-4 Credits)

A master's thesis is part of the degree track options. Credit hours, topic, and workload are determined by the student's advisor. Repeatable. Max hours: 6 Credits.

Grading Basis: Letter Grade with IP

Repeatable. Max Credits: 6.

RSEM 7000 - Doctoral Seminar in Research Methods (3 Credits)

Designed for students beginning doctoral work, explores conducting and evaluating qualitative and quantitative research. The chain of reasoning linking the conceptualization of a research problem, the posing of questions, and the collection and interpretation of evidence is examined. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to EDHDPHD, LDRE-EDd, EDLI-PhD and SPSY-PsyD majors within the School of Education and Human Development.

Typically Offered: Fall.

RSEM 7001 - Applied Research Methods I (3 Credits)

Introduces students to principles of quality research design, and provides a conceptual and hands-on procedural introduction to quantitative and qualitative methods common in education-related research. Takes an explicit focus on understanding and mitigating potential biases in research methods and design. Restriction: Restricted to LDRE-EDD students. Max hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to LDRE EDD majors within the School of Education and Human Development

RSEM 7002 - Applied Research Methods II (3 Credits)

Prepares students with conceptual knowledge and procedural skills of designing quality, applied research from critical and pragmatic perspectives. Focus on quantitative analysis methods, including survey and assessment item development. Students continue deeper review of extant literature for intended dissertation topic. Prereq: RSEM 7001 or permission from the instructor. Restriction: Restricted to LDRE-EDD students. Max hours: 3 Credits.

Grading Basis: Letter Grade

Prereq: RSEM 7001. Restriction: Restricted to LDRE-EDD students.

RSEM 7003 - Applied Research Methods III (3 Credits)

Content will focus on qualitative data collection and analysis methods, and mixed methods design including program evaluation and improvement research. Students will work with faculty on development of dissertation in practice design. Prereq: RSEM 7002 or permission from the instructor. Restriction: Restricted to LDRE-EDD students. Max hours: 3 Credits.

Grading Basis: Letter Grade

Prereq: RSEM 7002. Restriction: Restricted to LDRE-EDD students.

RSEM 7010 - Educational Assessment And Measurement (3 Credits)

This advanced course incorporates foundational knowledge and application of assessment and measurement tools in school settings. Foundational concepts are utilized to better understand student achievement and growth indicators, and inferences about school and educator effectiveness; survey measures are also addressed. Max hours: 3 Credits.

Grading Basis: Letter Grade

RSEM 7050 - Methods of Survey Research (3 Credits)

Covers the purposes and methods of survey research. Topics included are: goals and uses of survey research, data collection methods, questionnaire and interview protocol design, reliability and validity of data collection methods, sampling, ways to reduce error in data collection and sampling, data analysis techniques commonly used in survey research studies, interpreting and reporting results, and ethical issues. Students design and conduct a survey as part of the course requirements. Repeatable. Max Hours: 6 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 6.

RSEM 7080 - Methods of Qualitative Inquiry (3 Credits)

Prepares graduate students to conduct field research employing qualitative methods and perspectives. Students become familiar with evolving theoretical and methodological perspectives in qualitative research. Students practice and apply observation, interview, and discourse data collection and analysis techniques. Repeatable. Max hours: 6 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 6.

RSEM 7100 - Advanced Methods of Qualitative Inquiry (3 Credits)

An advanced seminar directed at individuals who have completed an introductory course in methods of qualitative research. Topics included are qualitative data collection, data analysis, and writing about data.

Prereq: RSEM 7080. Max hours: 3 Credits.

Grading Basis: Letter Grade

Prereq: RSEM 7080

Typically Offered: Spring.

RSEM 7110 - Intermediate Statistics (3 Credits)

Prepares graduate students with advanced methods of analyzing quantitative data using inferential statistics. Topics covered are chi-square; one-way ANOVA and factorial ANOVA; correlation and multiple regression; introductions to other multivariate techniques; power and effect size; and quantitative methodology. Software: SPSS, JASP, R, JAMOVI. Prereq: RSEM 5100. Repeatable. Max hours: 6 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 6.

Prereq: RSEM 5100

RSEM 7120 - Advanced Methods in Quantitative Inquiry and Measurement (3 Credits)

Covers advanced topics in quantitative design and analysis, including advanced measurement topics. Topics include: specific types of design used in experimental, quasi-experimental, co-relational, and survey research; multivariate ANOVA, ANCOVA and MRC; factor and trend analyses; classical test theory; and IRT approaches. Students analyze their own data using techniques presented in the course. Repeatable. Max Hours: 6 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 6.

RSEM 7130 - Advanced Measurement: Item Response Theory (3 Credits)

This course will consider theory and methods for the educational and psychological measurement of latent variables using item response theory. Students will understand and be able to apply concepts from item response theory, specifically the Rasch model, to understand, evaluate, and construct measures. Recommended students have Introduction to Statistics and a survey design course. Max hours: 3 Credits.

Grading Basis: Letter Grade

RSEM 7140 - Management & Secondary Analysis of Large Datasets (3 Credits)

Large education, community, and health datasets are underutilized research resources, providing large samples and longitudinal data otherwise too costly and time-consuming to collect. Students will work in their discipline area to learn to access, manage, and appropriately analyze extant datasets. Prereq: RSEM 7110 Intermediate stats or permission of instructor. Max hours: 3 Credits.

Grading Basis: Letter Grade

Prereq: RSEM 7110

RSEM 7150 - Mixed Methods Research (3 Credits)

This seminar is directed at individuals who have completed both qualitative and quantitative research courses and are interested in combining these in the mixed-method approach. Focus will be on developing the skills and knowledge needed to formulate mixed-methodological research questions in which quantitative and qualitative data collection, analysis and interpretational techniques are utilized simultaneously or sequentially. Prereq: RSEM 6100 and RSEM 7110. Max hours: 3 Credits.

Grading Basis: Letter Grade

Prereq: RSEM 6100 and RSEM 7110

RSEM 7200 - Ethnography (3 Credits)

This course is designed for persons interested in studying the phenomenon of learning in family and community contexts. The course blends foundational readings in the learning sciences and the ethnography of education with "participant-observation" fieldwork. The fundamentals of ethics regarding studies involving human persons, building relationships with study participants, becoming an "observant participant," writing field notes, and co-authoring meaning with study participants will be covered. Max hours: 3 Credits.

Grading Basis: Letter Grade

RSEM 7210 - Program Evaluation in Schools (3 Credits)

This advanced course incorporates foundational knowledge and application of the topic of program evaluation as it applies to inquiry and decision making in schools and other educational settings. Max hours: 3 Credits.

Grading Basis: Letter Grade

RSEM 7220 - Program Evaluation Theory and Design (3 Credits)

This course introduces a variety of program evaluation theories, designs, approaches, and tools useful for evaluating a program or policy, including needs assessment, formative and summative evaluations, process evaluation, monitoring outputs and outcomes, impact assessment, and cost analysis. Max hours: 3 Credits.

Grading Basis: Letter Grade

RSEM 7300 - Research Grant Writing (3 Credits)

The purpose of this course is to provide students with a deep understanding of grants and writing grant proposals targeted to major funders' requests for proposals. Students will learn the parts of a grant proposal, writing style difference, budgets, participate in a mock grant reviewer panel, and write a full grant proposal. Max hours: 3 Credits.

Grading Basis: Letter Grade

RSEM 7400 - Culturally Responsive Research and Evaluation Methods (3 Credits)

This course introduces a variety of culturally responsive paradigms, theories, and methodologies to examine their impact on traditional research and evaluation methods. The course will examine the role of ways of addressing power, privilege, and social justice frameworks. Max hours: 3 Credits.

Grading Basis: Letter Grade

Typically Offered: Summer.

RSEM 7500 - Special Topics: Research and Evaluation Methods (1-6 Credits)

Specific topics vary from semester to semester. Restriction: Restricted to graduate level students. Repeatable. Max hours: 12 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 12.

Restriction: Graduate level students.

RSEM 7700 - Multilevel Modeling: HLM (3 Credits)

Focus is on the analysis of nested data (e.g., students within classrooms and schools, public transportation users within cities) using HLM. Applications include multilevel multiple regression, growth models, and experimental designs. Familiarity with multiple regression and factorial ANOVA is required. Prereq: RSEM 7110 Intermediate Statistics or equivalent. Max hours: 3 Credits.

Grading Basis: Letter Grade

Prereq: RSEM 7110

Typically Offered: Fall.

RSEM 7800 - Structural Equation Modeling (3 Credits)

This course assumes no prior experience with Structural Equation Modeling, and serves as both theoretical and practical introduction. We will relate SEM to participants' previous knowledge of multiple linear regression, then expand to examine correlated and causally related latent constructs. Prereq: RSEM 7110: Intermediate Statistics or equivalent, or instructor consent. Restriction: Restricted to Graduate level students.

Max hours: 3 Credits.

Grading Basis: Letter Grade

Prereq: RSEM 7110 Restriction: Restricted to Graduate level students

Typically Offered: Fall.

RSEM 7840 - Independent Study: RSEM (1-4 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

RSEM 7900 - Thesis/Dissertation Proposal Writing (3 Credits)

This course is designed to provide you with a structure and support for developing the initial elements of your dissertation or thesis proposal. This course can be considered an 8week intensive writing session providing a framework for completing a solid first draft by week 8. Max hours: 3 Credits.

Grading Basis: Letter Grade