## ADD, CHANGE OR DELETE PROGRAM OR UNIT

Complete this form consistent with the instructions in Academic Policy 1622.20. Use the form to add, change, or delete a program or unit. Proposed additions and changes must be consistent with Academic Policies 1100.40 and 1621.10 and any other policies which apply.

| SECTION I: A                             | pprovals  |  |                             |       |  |  |                     |  |
|--|---|--|-----------------------------|-------|--|--|---------------------|--|
| Department / Program Chair               |   | Date Sub   | mitted                      |       | Faculty Senate Chair   |  | Date                |  |
| College Dean                             |   | Date   |                             |       | Provost  |  | Date                |  |
| University Course and Programs Committee |   | Date   |                             |       | Board of Trustees Approval/Notification Date                       |  |                     |  |
| Graduate Council Chair                   |   | Date   | Date                        |       | Arkansas Higher Education Coordinating Board Approval/Notification |  |                     |  |
| SECTION II: P                            | rofile Data - Requir                              | ed Inforr  | nation and                  | l Na  | me Change In   | formation  |                     |  |
| Academic Unit:                           | ☐ Major/Field                                     | of Study   | Minor                       |       | ⊠Other Uni   | it <u>Graduate Certificate: Ed</u><br><u>Psychology</u>                                | ucational           |  |
| Level:                                   | Undergradu  | ate  | ⊠ Gradua                    | ate   | Law  | Effective Catalog Year   | <u>2011</u>         |  |
| Current Name                             |   |  |                             |       |  |  |                     |  |
| College, School, Division EDUC           |   |  | Department Code <u>CIED</u> |       |  |  |                     |  |
| Current Code (6 digit Alpha)             |   | Proposed Code (6 digit Alpha) <u>EDPSMC</u> Prior approval from the Office of the Registrar is required. |                             |       |  |  |                     |  |
| ☐Interdisciplinary Program               |   | CIP Code 42.1801 Prior assignment from Office of Institutional Research is required.                     |                             |       |  |  |                     |  |
|  | ducational Psychologic changed, enrollment of cur |  | reflects the new            | v nam | e.   |  |                     |  |
| SECTION III: A                           | dd a New Program                                  | /Unit  |                             |       |  |  |                     |  |
|  |   |  |                             |       |  | for a full program proposal a<br>HE <http: td="" www.adhe.arknet<=""><td></td></http:> |                     |  |
|  | m proposal uses course<br>ed here:                |  |                             | cader | mic college. The   | signature of the dean of that  | academic college is |  |
| SECTION IV: E                            | liminate an Existin                               | g Prograr  | n/Unit                      |       |  |  |                     |  |
| Code/Name                                | Effective Catalo                                  | og Year  |                             |       |  |  |                     |  |
|  | mitted to program after<br>rogram to complete un  |  |                             |       | n: Year: _   |  |                     |  |
| SECTION V: P                             | roposed Changes to                                | an Exist   | ing Progra                  | am    |  |  |                     |  |
|  | ment of the exact char<br>lese boxes apply and pr |  |                             | gnatı | ıre:   |  |                     |  |
|  | m change proposal adde is required here:          |  |                             |       |  | ege. The signature of the dea  | an of that academic |  |
| _  | 10/1/00   |  |                             |       |  |  |                     |  |

| Program change proposal deletes courses offered by another academic college. The signature of the dean of that academic college is required here:   |
|---|
| Check all the boxes that apply and complete the required sections of the form:  |
| □ Change of Name and Code (Complete only sections I, II, V and VII.) □ Change Course Requirements: (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.) |
| Change Delivery Site/Method (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)  |
| Change Total Hours (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)   |

#### **SECTION VI: Justification**

Justify this change and state its likely effect on any other degree program (including those outside the school or college). Identify any program or program components (other than courses) to be eliminated if this program is implemented. (Program and course change forms must also be submitted for such related changes.)

#### **SECTION VII: Catalog Text and Format**

Insert the current catalog text, with proposed changes identified in Section V inserted and tracked in Microsoft Word. Be sure that all proposed changes are inserted and tracked. Only changes explicitly stated in Section V will be considered for approval by the University Course and Programs Committee, the Graduate Council and the Faculty Senate.

#### Include the following elements, in order, in the catalog text for proposed undergraduate program(s) or program changes:

- State complete major/program name
- Briefly define or describe the major/program or discipline.
- Identify typical career goals or paths for graduates. (Optional)
- State admission requirements (if any) for entry or entry into upper/advanced level of major/program.
- Identify location in catalog of university, college/school, and department/program requirements which the student must meet in addition to hours in the major, but do not restate these requirements.
- State course requirements in the major and any allied areas, giving number of hours and specific courses; specify electives or elective areas and give numbers of hours and courses in elective pools or categories; identify any other course requirements.
- State any other requirements (required GPA, internship, exit exam, project, thesis, etc.).
- Identify name and requirements for each concentration (if any).
- Specify whether a minor or other program component is allowed or required and provide details.

For minors, state requirements in terms of hours, required courses, electives, etc.

For graduate program/units, include elements (as needed) parallel to those listed for undergraduate programs above.

For Law School program/units, prepare text consistent with current catalog style.

For centers, prepare text consistent with current catalog style.

# **EDUCATIONAL STATISTICS AND RESEARCH METHODS (ESRM) (Graduate Certificates, M.S., Ph.D)**

George Denny Program Leader 231 Graduate Education Building 479-575-7320

E-mail: gdenny@uark.edu

The Educational Statistics and Research Methods program develops professionals in the areas of educational research methods and policy studies, both through courses and Independent research. Graduates can obtain employment with school districts, educational agencies, and industries with internal data analysis needs.

Prerequisites for Acceptance to the Master of Science Program in Educational

**Statistics and Research Methods:** In addition to meeting University requirements for admission to the Graduate School, applicants must have earned a bachelor's degree with at least a 2.75 cumulative GPA and a combined score of at least 1000 on the verbal and quantitative sections and a 3 on the writing section of the Graduate Record Examinations.

**Requirements for the Master of Science Degree:** Graduates are required to satisfy the requirements of the Graduate School for a Master of Science degree. The degree requires 30 hours, consisting of these required courses (18 hours):

ESRM 5013 Research Methods in Education

EDFD 5353 Philosophy of Education

EDFD 5373 Psychological Foundations of Teaching & Learning

ESRM 5393 Statistics in Education and Health Professions

ESRM 5653 Educational Assessment

EDFD 5683 Issues in Educational Policy

One course from the following (3 hours):

EDFD 5303 Historical Foundations of Modern Education

EDFD 5473 Adolescent Psychology in Education

EDFD 5573 Life-Span Human Development

In addition to the courses listed, students are also required to complete these independent research requirements of ESRM 599V Research Practicum (3 hours) and ESRM 600V Master's Thesis (6 hours), as well as pass a comprehensive examination.

**Prerequisites for Acceptance to the Graduate Certificate Programs:** In addition to meeting University requirements for admission to the Graduate School, applicants must have earned a master's degree with a 3.25 cumulative GPA and scores of at least 500 on both the quantitative and verbal sections of the Graduate Record Examinations OR be currently enrolled in a doctoral program at the University of Arkansas.

**Certificate Requirements:** 18 semester hours from the list of courses for a certificate with a grade-point average of 3.50.

Graduate Certificate in Educational Program Evaluation: The graduate certificate in Educational Program Evaluation recognizes students who take a concentrated core of courses focused on systematic and rigorous evaluation of educational programs and policies. Students who earn this certificate have a working knowledge of qualitative and quantitative evaluation procedures and can use these to plan, conduct, and report on evaluations.

Program of Study:

ESRM 6403 Educational Statistics and Data Processing

ESRM 6413 Experimental Design in Education

ESRM 6613 Evaluation of Policies, Programs, and Projects

ESRM 6533 Qualitative Research

ESRM 699V Seminar: Survey Research Methods

One course from the following (3 hours):

ESRM 6423 Multiple Regression Techniques for Education

ESRM 6453 Applied Multivariate Statistics

ESRM 6543 Advanced Qualitative Research

ESRM 6653 Measurement and Evaluation

ESRM 699V Seminar (approved by ESRM faculty)

Graduate Certificate in Educational Psychology: The graduate

certificate in Educational Psychology recognizes students who take a concentrated core of courses focused on educational psychology. Students who earn this certificate develop a foundational understanding of educational psychology theories, application of theory to educational practices and evaluation, and methods for identifying issues that arise in the learning process for learners of all ages.

Program of Study:

EDFD 5373 Foundations of Teaching and Learning

EDFD 5573 Lifespan of Human Development

EDFD 5673 Principles of Motivation

EDFD 5773 Advanced Topics in Educational Psychology

Two courses from the following (6 hours):

ESRM 6413 Experimental Design

ESRM 6423 Multiple Regression Techniques for Education

ESRM 6653 Measurement and Evaluation

## Graduate Certificate in Educational Measurement: The graduate

certificate develops professionals in the areas of measurement, testing, and assessment, through courses in the area of instrument development and research

design. Graduates can obtain employment with educational agencies and

industries with assessment and research analysis needs.

Program of Study:

ESRM 5653 Educational Assessment

ESRM 6403 Educational Statistics and Data Processing

ESRM 6653 Measurement and Evaluation

ESRM 6753 Advanced Measurement

One course from the following (3 hours):

ESRM 6613 Evaluation of Policies, Programs, and Projects

ESRM 699V Seminar: Survey Research Methods

And one course from the following (3 hours):

ESRM 6413 Experimental Design

ESRM 6423 Multiple Regression Techniques for Education

## **Graduate Certificate in Educational Statistics and Research Methods:**

The graduate certificate in Educational Statistics and Research Methods recognizes students who complete a core of courses focused on developing theoretical, application, and interpretative aspects of statistical techniques and research methods. Graduate students completing this certificate will also develop comprehensive programming and data management skills necessary for today's academic researcher.

Program of Study:

ESRM 6403 Educational Statistics and Data Processing

ESRM 6413 Experimental Design

ESRM 6423 Multiple Regression

ESRM 6453 Multivariate Statistics

One course from the following (3 hours):

ESRM 5653 Educational Assessment

ESRM 6653 Measurement and Evaluation

And one course from the following (3 hours):

ESRM 6513 Advanced Experimental Design

ESRM 6523 Advanced Multiple Regression

ESRM 6553 Advanced Multivariate Statistics

ESRM 699V Advanced Statistics Seminar: Approved by ESRM Faculty

### **Doctor of Philosophy in Educational Statistics and Research Methods:**

1622.20A p/vcaa 10/1/00

The increased emphasis on educational accountability and data-driven decision making to improve public school institutions, as well as greater reliance on empirical research and analysis in public policy and educational studies, have led to a greater need for experts in educational statistics and research methods. The Educational Statistics and Research Methods doctoral program develops professionals who can lead in these areas through coursework and independent research in educational statistics, research design, assessment, and program evaluation.

Admission Requirements for the Ph.D. Degree: In addition to meeting University requirements for admission to the Graduate School, applicants should have an earned master's degree with a minimum 3.25 GPA, GRE Verbal of 550, GRE-Quantitative of 550, and GRE-Writing of 3.5. Higher scores in one area can compensate for lower scores in another area.

**Requirements for the Ph.D. Degree:** Students must complete all requirements of the Graduate School for the Doctor of Philosophy degree, and complete an approved program of study including a minimum of 36 credit hours of core courses, 9 hours of elective courses, and 18 credit hours of doctoral dissertation. Coursework must be completed with a cumulative grade average of at least 3.25, with no credit for courses with a grade of "C" or lower.

#### **Required Courses:**

36 Hours of Core Courses

EDFD 5373 Psychological Foundations of Teaching & Learning

EDFD 5683 Issues in Educational Policy

ESRM 6403 Educational Statistics and Data Processing

ESRM 6413 Experimental Design in Education

ESRM 6423 Multiple Regression Techniques for Education

ESRM 6453 Applied Multivariate Statistics

ESRM 6513 Advanced Experimental Design

ESRM 6523 Advanced Multiple Regression

ESRM 6533 Qualitative Research

ESRM 6553 Advanced Multivariate Statistics

ESRM 6613 Evaluation of Policies, Programs and Projects

ESRM 6653 Measurement and Evaluation

9 Hours of Elective Courses from the following:

ESRM 5653 Educational Assessment

ESRM 6753 Advanced Measurement

ESRM 6993 Seminar: Categorical Data Analysis

ESRM 6993 Seminar: Exploratory Data Analysis

ESRM 6993 Seminar: Structural Equation Modeling

ESRM 6993 Seminar: Survey Research Methods

Other Math Department and Quantitative Courses approved by ESRM

Faculty

18 hours of ESRM 700V Doctoral Dissertation

Educ Stats & Research Methods (ESRM)

**ESRM5013 Research Methods in Education (Sp, Su, Fa)** General orientation course which considers the nature of research problems in education and the techniques used by investigators in solving those problems. Prerequisite: graduate standing.

ESRM5393 Statistics in Education and Health Professions (Sp, Su, Fa) Applied statistics course for Master's degree candidates. Includes concepts and operations for frequency distributions, graphing techniques, measures of central tendency and variation,

sampling, hypothesis testing, and interpretation of statistical results.

**ESRM5653 Educational Assessment (Irregular)** Introduction to measurement issues and basic test theory. Focus on types and usage of assessment tools, data management, and analysis and interpretation of educational data. Practical training in the utilization and interpretation of academic achievement data in Arkansas.

**ESRM600V Master's Thesis (Sp, Su, Fa) (1-6)** May be repeated for up to 6 hours of degree credit.

ESRM605V Independent Study (Sp, Su, Fa) (1-6)

**ESRM6403 Educational Statistics and Data Processing (Sp, Su, Fa)** Theory and application of frequency distributions, graphical methods, central tendency, variability, simple regression and correlation indexes, chi-square, sampling, and parameter estimation, and hypothesis testing. Use of the computer for the organization, reduction, and analysis of data (required of doctoral candidates). Prerequisite: ESRM 5013 or equivalent.

**ESRM6413 Experimental Design in Education (Sp)** Principles of experimental design as applied to educational situations. Special emphasis on analysis of variance techniques used in educational research. Prerequisite: ESRM 6403 or equivalent.

**ESRM6423 Multiple Regression Techniques for Education (Fa)** Introduction to multiple regression procedures for analyzing data as applied in educational settings, including multicollearity, dummy variables, analysis of covariance, curvi-linear regression, and path analysis. Prerequisite: ESRM 6403.

**ESRM6453 Applied Multivariate Statistics (Sp)** Multivariate statistical procedures as applied to educational research settings including discriminant analysis, principal components analysis, factor analysis, canonical correlation, and cluster analysis. Emphasis on use of existing computer statistical packages. Prerequisite: ESRM 6413.

**ESRM6513 Advanced Experimental Design (Irregular)** Advanced topics of the general linear model, including hierarchical linear modeling and longitudinal analysis with a focus on developing the mathematical and theoretical basis for these methods. Prerequisite: ESRM 6413.

**ESRM6523** Advanced Multiple Regression (Irregular) Advanced topics of correlational research methods, including logistic regression and path analysis with a focus on developing the mathematical and theoretical basis for these advanced methodological designs. Prerequisite: ESRM 6423.

**ESRM6533 Qualitative Research (Sp, Fa)** Introduction of non-quantitative methods, including data collection through interviews, field observation, records research, internal and external validity problems in qualitative research. Prerequisite: ESRM 6403.

**ESRM6543 Advanced Qualitative Research (Sp)** Preparation for the conduct of qualitative research, structuring, literature reviews, data collection and analysis, and reporting results. Prerequisite: ESRM 6533. May be repeated for up to 6 hours of degree credit.

**ESRM6553 Advanced Multivariate Statistics (Irregular)** Builds on the foundation provided in Multivariate and introduces techniques that extend methodological elements of canonical, discriminant, factor analytic, and longitudinal analyses, providing the mathematical and theoretical foundations necessary for these designs. Prerequisite: ESRM 6453.

**ESRM6613 Evaluation of Policies, Programs, and Projects (Fa)** Introduction to evaluation in social science research, including why and how evaluations of programs, projects, and policies are conducted; includes analysis of actual evaluations in a variety of disciplines. Prerequisite: ESRM 6403. (Same as EDRE 6213)

**ESRM6623 Techniques of Research in Education (Sp, Su)** Use of scientific method in attacking educational problems. Emphasis placed on the planning and design of research studies, collection of reliable and valid data, sampling methods, and analysis and interpretation of data. Prerequisite: ESRM 6403.

**ESRM6653 Measurement and Evaluation (Irregular)** Fundamentals of measurement: scales, scores, norms, reliability, validity. Test and scale construction and item analysis. Standardized measures and program evaluation models in decision making. Prerequisite: ESRM 6403.

**ESRM668V Practicum in Research (Irregular) (1-6)** Practical experience in educational research on campus, in school systems, or in other agencies in educational program development.

**ESRM699V Seminar (Irregular) (1-6)** Prerequisite: advanced graduate standing. May be repeated for up to 6 hours of degree credit.

**ESRM700V Doctoral Dissertation (Sp, Su, Fa) (1-18)** Prerequisite: Candidacy. Educational Foundations (EDFD)

**EDFD5303 Historical Foundations of Modern Education (Sp, Su)** Critical analysis and interpretation of the historical antecedents of contemporary education, focusing upon the American experience from **EDFD5303 Historical Foundations of Modern Education (Sp, Su)** Critical analysis and interpretation of the historical antecedents of contemporary education, focusing upon the American experience from the colonial period to the present.

**EDFD5323 Global Education (Irregular)** Comparative and global analysis of international education with emphasis on cultural education and implications for the future.

**EDFD5353 Philosophy of Education (Irregular)** Introduction to the method and attitude essential to effective analysis and interpretation of issues and values within a society reflecting cultural, ethnic, gender, and global diversity. Prerequisite: Graduate standing.

**EDFD5373 Psychological Foundations of Teaching and Learning (Irregular)** Psychological principles and research applied to classroom learning and instruction. Social, emotional, and intellectual factors relevant to topics such as readiness, motivation, discipline, and evaluation in the classroom.

**EDFD5473 Adolescent Psychology in Education (Irregular)** Study of the adolescent experience with emphasis on the unique psychological problems and tasks of this developmental stage; role of educators in the facilitation of crises resolutions in social, personal and institutional conflicts. Prerequisite: Graduate standing.

**EDFD5573 Life-Span Human Development (Sp, Su, Fa)** Basic principles of development throughout the human life-cycle. Physical, cognitive, social, emotional, and personality development.

**EDFD5673 Principles of Motivation (Sp)** This course focuses on theories and concepts of human motivation. Students explore what motivates students to learn and examine strategies, techniques, and interventions that promote and sustain learner motivation.

**EDFD5683 Issues in Educational Policy** (**Sp, Su, Fa**) This course examines how K-12 education policy is designed and implemented in the United States. Students will develop a working knowledge of policymaking frameworks to examine major education policies of current interest and debate key policy issues that arise at each level of government.

**EDFD 5773 Advanced Topics in Educational Psychology (Irregular)** Builds on the theoretical foundation provided in Psychological Foundations of Teaching and Learning through the exploration of current research in educational psychology. Students examine the application of psychological theory to learners of all ages. Prerequisite: EDFD 5373 and ESRM 6403 or equivalent.

#### SECTION VIII: Action Recorded by Registrar's Office

| PGRM   | SUBJ _                                    |                              | CIP                        | CRTS                                   |                     |  |
|--|---|------------------------------|----------------------------|--|---------------------|--|
| DGRE   | PGCT                                      |                              | OFFC&CRTY VAL              | OFFC&CRTY VALID                        |                     |  |
| REPORTING CODE                                   | S   |                              |                            |  |                     |  |
| PROG. DEF  |   |                              | REQ. DEF.                  | Initials                               | Date                |  |
| Distribution                                     |   |                              |                            |  |                     |  |
| Notification to:<br>(1) College<br>(7) Treasurer | (2) Department<br>(8) Undergraduate Progr | (3) Admissions ram Committee | (4) Institutional Research | (5) Continuing Education Initials Date | (6) Graduate School |  |