DEPARTMENT OF YOUTH DEVELOPMENT AND AGRICULTURAL EDUCATION
COURSE INFORMATION
MASTER’S PROGRAM

The YDAE Master of Science program is designed to ground the student in statistics, research methods, and theoretical foundations. YDAE coursework emphasizes formal and nonformal education and communication. Students, in consultation with their graduate committee, select elective courses in a related field of study.

**Master’s Thesis:**
- 3 credit hours - 1 Statistics (quantitative) course
- 3 credit hours - 1 Research method (qualitative research methods, evaluation) course
- 6 credit hours - Theoretical Foundational courses
- 9 credit hours - YDAE courses (independent study courses included)
  - 1 credit hour YDAE 644 seminar included in these 9 hours
- 6 credit hours - YDAE 698 Research M.S. Thesis required
- 6 credit hours - elective course work (related field of study)
- 33 credit hours

**Master’s Non - Thesis**
- 3 credit hours - 1 Statistics (quantitative) course
- 3 credit hours - 1 Research method (qualitative research methods, evaluation) course
- 6 credit hours - Theoretical Foundational courses
- 9 credit hours - YDAE courses (independent study courses included)
  - May include 1 credit hour YDAE seminar, but not required
- 3 credit hours - YDAE 590 Special Problems required for Non Thesis students only
- 6 credit hours - elective course work (related field of study)
- 30 credit hours

Approved January, 2009
These courses are among the current recommended courses to complete a Youth Development and Agricultural Education Master’s and/or PhD Program. This list will be updated on an as needed basis.

STATISTICS AND RESEARCH METHODS (6 CREDITS)

Requirement: 3 credits of quantitative statistics


STAT 503  Statistical Methods for Biology: Introductory statistical methods, with emphasis on applications in biology. Topics include descriptive statistics, binomial and normal distributions, confidence interval estimation, hypothesis testing, analysis of variance, introduction to nonparametric testing, linear regression and correlation, goodness-of-fit tests, and contingency tables. Open only to majors related to the life sciences. Offered Fall & Spring.

STAT 511  Statistical Methods: Descriptive statistics; elementary probability; sampling distributions; inference, testing hypotheses, and estimation; normal, binomial, Poisson, hypergeometric distributions; one-way analysis of variance; contingency tables; regression. Pre-req: MA 162. Offered: Fall & Spring.

STAT 512  Applied Regression Analysis: Inference in simple and multiple linear regression, residual analysis, transformations, polynomial regression, model building with real data, nonlinear regression. One-way and two-way analysis of variance, multiple comparisons, fixed and random factors, analysis of covariance. Use of existing statistical computer programs. Pre-req: STAT 503 or 511 or 517. Offered Summer, Fall & Spring.

STAT 514  Design of Experiments: Fundamentals, completely randomized design; randomized complete blocks; latin square; multi-classification; factorial; nested factorial; incomplete block and fractional replications for 2n, 3n, 2m x 3n; confounding; lattice designs; general mixed factorials; split plot; analysis of variance in regression models; optimum design. Use of existing statistical programs. Offered Spring 2008
Requirement: 3 credits research methods

**EDCI 615  Qualitative Research Methods in Education:** Focuses on expanding graduate students' research skills to include knowledge of the theories and methods associated with qualitative and qualitative-quantitative combined research. **Offered Spring. Pre-req: EDPS 533.** Being offered Summer & Fall 07

**EDCI 616  Advanced Qualitative Research Methods in Education:** This course focuses on expanding students' foundation level knowledge of qualitative research in the areas of theories, methods, analysis and interpretation, and presentation. **Offered Fall.**

**EDPS 531  Introduction to Measurement and Evaluation:** An introduction to the basic concepts and principles of measurement and evaluation with special emphasis on descriptive statistics, and teacher-made and standardized tests. **Offered once a year**

**EDPS 532  Measuring Educational Achievement:** A course in developing, analyzing, and interpreting measures of educational achievement. Emphasis is placed upon cognitive tests. Non-test techniques for assessing behavior are also explored. Prior experience with statistics or measurement, although helpful, is not required for this course. **Currently not offered**

**EDPS 533  Introduction to Educational Research 1: Methodology:** An introductory course in educational research and evaluation methodology which considers the various methods of educational research, the formulation of research hypotheses, and the preparation of research reports. **Pre-req: EDPS 235. Offered: Summer & Fall (07)**

**EDPS 534  Introduction to Educational Research II: Measurement Consideration:** An introductory course in measurement concepts and statistical reasoning, with emphasis on the selection, evaluation, and/or development of independent and dependent variables as they are employed in educational research settings. Unlike EDPS 531 and 532, this course is explicitly designed for the educational researcher and not for the teacher. **Offered Spring 08**

**EDPS 591M  Psycho/Measurement** Study of a special topic of interest to educational researchers or practitioners. Intensive study of research, theory, or practical aspects of a particular issue within the usual graduate class format. **Offered Fall (07)**

**EDPS 591U  Computers and Cognition** This course will deal with the interaction between memory and human cognition with technology in general and computers in specific. Specifically, we will explore the issues of affordances computers offer in terms of learning and how people learn in a technology rich environment (e.g., the web, hypermedia environments, virtual environments, video vs. text). The readings will cover a broad range of topics in cognitive psychology, How the Mind Works, and how technology rich environment can support learning in various content domains. For example, look at various technologies from a cognitive perspective, such as a virtual immersive environment designed for students to develop a basic understanding of DNA.
EDPS 630     Research Procedures in Education: Development of a philosophy of educational research and consideration of the methods for the selection and evaluation of techniques used in educational research. Techniques discussed are methods to control variables, sampling procedures, data collection procedures, statistical procedures, and research proposal development and writing. Pre-req: EDPS 533, PSY 601 or EDPS 533, STAT 502. Offered: Fall & Spring.

EDPS 636     Item Response Theory Models and model-data fit, estimation of ability and item parameters, item and test information, test construction, obtaining evidence of test reliability and validity, differential item functioning, norming, and equating. Prerequisite: EDPS 53100, (PSY 60100 or STAT 50200 or 51200). Typically offered Summer Fall Spring.

EDPS 638     Factor Analytic Procedures: Introduction to exploratory and confirmatory factor analysis techniques and examination of the use of factor analysis in social sciences. Emphasis on application of methods. Students will develop skills to conduct factor analytic research and critically review use of factor analysis in research. Offered: Spring

PSY 500     Statistical Methods Applied to Psychology, Education and Sociology: Descriptive statistics and an introduction to sampling statistics. Applied to psychological, sociological, and education data Offered Fall 07.

CSFS/PSY 502     Survey of Human Development: An introductory survey of methods and findings related to physical, psychological, and social development throughout the life span. Particular attention will be given to topics in the area of human development that have obvious applications for educators and other practitioners in the human services field. Offered Summer & Fall.

PSY 600     Statistical Inference: Emphasis is given to principles underlying both parametric and nonparametric inference. Pre-req: PSY 500. Offered: Fall & Spring.

PSY 601     Correlation and Experimental Design: Continuation of PSY 600 with emphasis upon the design and analysis of experiments. Pre-req: PSY 600. Offered: Fall & Spring.

SOC 580     Methods of Social Research I: An intermediate-level examination of research designs, measurement, and sampling with emphasis on issues of problem formulation and the logic and application of methodological procedures. Prerequisite: SOC 382, 383. Authorized equivalent courses or consent of instructor may be used in satisfying course pre- and co-requisites. Offered Fall 2007

SOC 581     Methods of Social Research II: Emphasis on statistical inference applied to sociological problems; topics include the binomial distribution and the logic of inference, one and two sample tests, confidence intervals, and chi-square. Introduction to bivariate correlation and regression, analysis of variance. Instructor approval is required. Prerequisite: SOC 382. Authorized equivalent courses or consent of instructor may be used in satisfying course pre- and co-requisites. Offered Spring 2008
SOC 583  Application of Social Research Methods: Specific methods of survey research, including questionnaire construction, and sampling techniques, as well as case studies and field experiments are covered. Emphasis is on the use of such methods and their implications for the nature of social data. Offered Spring 2008.

SOC 680  Advanced Social Research Methods: Survey analysis using regression models. Emphasizes ordinary least squares model applied to sociological problems. Also considered are path analysis and logic and logistic regression. A series of projects are required using the PUCC mainframe computer applying course concepts. Prerequisite: PSY 600 or SOC 581. Authorized equivalent courses or consent of instructor may be used in satisfying course pre- and co-requisites. Offered Fall 2007.

SOC 681  Selected Problems of Social Research: Working with already available data, each student will conduct one or more research projects, including conceptualization, operational procedures, analysis of the data, and report writing. The data to be used may be from surveys, small group studies, organizational studies, or written documents. Prerequisite: PSY 600 or SOC 680. Authorized equivalent courses or consent of instructor may be used in satisfying course pre- and co-requisites. This course may be repeated for up to a total of 6.00 credits. Spring 2008.

THEORETICAL FOUNDATIONAL COURSES (6 CREDITS)

EDCI 506  Environmental Education: (FNR 564) Synthesis of philosophies, scientific principles and methods for environmental education programs in forests, camps, and schools. Students conduct and summarize literature research on scientific and educational principles. In interdisciplinary teams, they develop, implement, and evaluate curricula for schools, nature centers, interpretive and outdoor education programs. Offered Summer & Fall

EDCI 516  Seminar In Environmental Education: The seminar covers current research and literature in environmental education, focusing on teaching children and adults about the environment. Topics vary by semester and student interest. Offered Summer, Fall, Spring

EDCI 517  Survey Of Science Education: Introduction to current issues and research in science education, broadly organized under themes of learning, teaching, and science curriculum. Offered Fall

EDCI 518  The Nature Of Science In Science Teaching: Explores philosophical issues related to the scientific enterprise, such as the production and validation of scientific knowledge; the role of the scientific community; and the influence of gender and culture on doing science. Also examines the implications of these issues for science teaching and learning, as well as for research in science education. Offered Spring 2008

EDCI 560  Educational Technology for Teaching and Learning: Educational/training application of instructional technology, including computers, media, and instructional design. Stresses knowledge, skills, and attitudes needed to implement and manage technology in instructional environments. Offered Spring, Summer & Fall
EDCI 561  Computer-assisted Instruction:  Examines aspects of computer-assisted instruction. Primary focus upon application of effective learning design strategies for computer-mediated instruction within popular CAI languages, such as BASIC and PILOT, basic computer-managed instruction system, including practical classroom considerations. Offered: Spring, Summer & Fall. Pre-req: EDPS530, EDCI 270 or 560.


EDCI 566  Educational Applications of Hypermedia: Examination of educational applications of hypermedia tools and related research. Creation of hypermedia instructional materials. Incorporation of digitized media (sound, photographs, and motion clips) in hypermedia is explored. Offered: Summer, Fall. 566Y offered Fall 07. Pre-req: EDCI 270 or 560.

EDCI 567  Action Research In Science Education: An introduction to various models and conceptions of teacher action research in science education. Students review literature on action research, participate in small research cohorts, and plan and conduct action research within their respective educational situations. Offered Fall & Spring.

EDCI 570  Delivery Systems for Education and Training: Selection, utilization, and evaluation of instructional business/industrial training for live, face-to-face presentation, packaged instruction, and/or distance education. Offered Summer, Fall, Spring.

EDCI 571  Production of Instructional Materials: Involves the design, development, and editing of digitally-based materials for use in computer-based learning environments. Includes planning and implementing text, graphics, audio, and video materials for use as communication and learning tools. Offered Summer, Fall, Spring.

EDCI 572  Introduction to Learning Systems Design: An introduction to the principles of designing instructional materials and to instructional communication theory and techniques. Topics include objectives, student characteristics, media selection, communication variables, message design, and systematic evaluation. Offered: Spring, Summer & Fall.

EDCI 575  Foundations of Distance Learning: An introduction to the field of distance learning/education. Examination of basic concepts and principles of distance learning, the theoretical underpinnings of the field, research and application literature, and distance education delivery technologies. A systematic approach to the design, development, delivery, and evaluation of instruction for learners at a distance is emphasized. Special attention is given to Web and two-way video delivery technologies. Offered Spring, Summer & Fall. Pre-req: EDCI 572. Last offered Fall 06.

EDCI 585  Multicultural Education: Concepts and theories of ethnicity and cultural pluralism: implications for educational change. Examination of value systems and cultural characteristics of various ethnic groups, different ethnic learning styles, ethnically pluralistic curriculum content and instructional materials, and conceptual curriculum design strategies for implementing multicultural education. Offered Summer & Fall.
EDCI 619  Learning Science: An in-depth study of how children and adults learn science; how learner's ideas and ways of thinking about science phenomena and concepts, abilities to "do" science, and attitude toward science and school science impact science learning. The implications to K-16 teaching, curriculum, and assessment is explored. Offered Spring 2008


EDST 500  Philosophy of Education: Study of fundamental philosophical issues and concepts in education. Treatment of historical and contemporary positions in educational philosophy and connection of philosophical understandings to American schools. Offered Summer, Fall & Spring.

EDST 501  History of American Education: Survey course with analysis of key terms: history, education, and American. Examination of European background of American education; cultural, philosophical, psychological, historical, and sociological factors that have shaped the educational system. Offered Summer, Fall & Spring.

EDST 502  History of Western Education: Survey of movements and ideas that contributed to education in Western Europe and influenced American education. Topics include: education during Antiquity, Medieval Period, Reformation, and Industrial Revolution. Emphasis on educational developments during eighteenth through twentieth centuries. Offered Summer, Fall & Spring.

EDST 603  The American College and University: Recommended for those who plan to teach on the higher level. History of the development of American higher education, current trends and/or problems, and individual in-depth study of matters related to the individual student's area of specialization. Offered Spring.

EDPS 500  Human Relations in Group Counseling: Human relations skills and the stages and functioning of group counseling and other group processes are treated in the instructional component. Students participate in small groups designed to increase personal awareness and relationship skills in the two clock hours laboratory component. Fall & Spring.

EDPS 535  Personal-Social Dynamics in the Classroom: Stresses understanding of personal and socio-emotional growth of students and teachers in the school environment. Attention is given to means of promoting personal and socio-emotional growth.

FNR 598  Topical Problems in Forestry and Natural Resources: Subjects and problems of interest to the student. Involves individual study, Laboratory and Lecture, Permission of instructor required. 1.000 TO 3.000 Credit Hours Typically offered Spring Fall Summer.

PSY 552  Development in Adolescence: An examination of patterns of change in the years between childhood and adulthood together with consideration of the social contexts of family, school, peer group, and work in which those patterns manifest themselves. Offered: Fall
PSY 553  Development in the Adult Years: A review of the major contemporary theories of continuity and change during the period of maturity, from the end of the dependency of childhood to the beginning of the dependency of old age. Offered: Fall

PSY 651  Development in Infancy and Childhood: Critical review of physical-motor, cognitive, and social development with special emphasis on infancy and early childhood. Offered: Fall & Spring. Last offered Fall 06

SOC 570  Sociology of Education: Analysis of the American public school as a social organization. Includes: interrelations among community power structure, social stratification, and the school; the roles of superintendent, principal, and teacher in community and school; the classroom as a social system; student culture; and teaching as a profession. Not been offered for last 5 semesters.

SOC 600  Development of Sociological Theory: The development of sociological thought in Western Europe and subsequently in the United States from the publication of Marx's early manuscripts through the sociological writings of the 1940s. Offered: Fall

SOC 602  Contemporary Sociological Theories: A companion course to SOC 600. Examination of the works of recent and contemporary sociological theorists such as Durkheim, Weber, Pareto, Parsons, and Merton, and of major theorists in related disciplines such as Marx, Freud, and Malinowski. Includes an examination of major "schools" or frames of reference such as ecology, structural-functionalism, etc. Offered: Spring – Instructor approval required

YOUTH DEVELOPMENT & AGRICULTURAL EDUCATION COURSES (9 CREDITS)

YDAE 540  Program Development in Agricultural and Extension Education: Application of principles of agricultural and extension education. Emphasis on program development, supervised experience programs, and effective organization of an agricultural and extension education program. Open to employed agricultural extension education personnel with less than three years of experience. Replaces EDCI 540. Offered: Fall (even year)

YDAE 542Y (HORT 542Y) Introduction to Agricultural Biotechnology: (HORT 542) This course is offered, via distance education, to help formal and informal educators understand how transgenic organisms are produced, as well as to enable them to teach science and issues surrounding agricultural biotechnology. Offered: Summer

YDAE 555  Principles of Extension Education: An overview of the origin, scope, function, objectives, and organization of the cooperative extension service, including a thorough analysis of the work of the extension educator and career opportunities. Replaces EDCI 555. Offered: Spring. (Even Year)

YDAE 566  Conflict Management in Agricultural and Extension Education: An examination of the theory and practice of conflict management. Particular emphasis is given to the formal public educational system and the nonformal extension education system. Through case studies of public and private controversies, students analyze conflicts and problem-solve courses of action. Through in-class and out-of-class assignments, students synthesize the conflict management literature and apply theory to current issues and topics in education and extension. Offered Fall (Odd Year).

YDAE 591  Special Topics: Specialized topics not covered in other courses. Topics, requirements, and credits to be determined yearly. Arrange hours and credits with different topics. Offered: Summer, Fall & Spring.

YDAE 591A/P  Principles of International Education & Engagement: Specialized topics not covered in other courses. Topics, requirements, and credits to be determined yearly. Arrange hours and credits with different topics. Offered: Summer, Fall & Spring.

YDAE 595  Internship in Agricultural and Extension Education: A special course designed to provide practical field experience under professional supervision in selected situation related to the student's area of specialization. Amount of credit to be determined by the nature and extent of the assignment. Offered: Summer, Fall & Spring.

YDAE 640  Courses of Study in Agricultural Education Programs: Principles and procedures of curriculum construction applied to development and organization for courses of study in agricultural science and business. Offered: Summer & Spring.

YDAE 641  Agricultural Education Programs for Post-Secondary Students: Planning, organizing, conducting, administering, and evaluating agricultural education programs for post-secondary audiences. Offered: Summer, Fall & Spring.

YDAE 642  Seminar in Agricultural and Extension Education: Identification and analysis of contemporary programs used in agricultural and extension education. Offered: Summer (Even Year), Fall & Spring.

YDAE 643  Current Issues in Agricultural and Extension Education: Examination of current issues in agricultural and extension education. Offered: Summer, Fall & Spring.

YDAE 644  YDAE Graduate Seminar: Specialized topics not covered in other courses. Topics, requirements, and credits to be determined yearly. Arrange hours and credits with different topics. Offered Fall, Spring & Summer.
RESEARCH CREDITS

YDAE 590    Special Problems: A study of special problems in agricultural communications, agricultural education, or youth development not covered in regular coursework. Arrange hours and credits. Offered: Summer, Fall & Spring. (3 credits required for non-thesis master’s)

YDAE 698    Research M.S. Thesis: Offered: Summer, Fall & Spring. (6 credits required for thesis master’s)

EDCI 699    Research PhD Thesis (12 credits required)

Related Area – 6 credits – Courses determined by Advising Committee