

## APPENDIX A

### List of potential courses in Statistical Design and Evaluation for Nutritional Sciences MS Thesis & Ph.D. Students

Visit the [UGA Bulletin](#) for more details on each course. \* Indicates Graduate Level only

Course Number	Course Title	Credit Hours	Description
BIOS 7010	Introductory Biostatistics I	3	Introductory statistics with applications to medical and biological problems. Topics to be covered include biostatistical design in health research, data collection and management, and introductory concepts and methods of statistical data analysis.
BIOS 7020	Introductory Biostatistics II	3	Introduction to a variety of statistical tools with applications in public health and the biological sciences, including survey sampling, multiple regression, experimental design, categorical data analysis, logistic regression, and survival analysis. Motivating examples will be drawn directly from the literature in health, biological, medical, and behavioral science.
ERSH 6300	Applied Statistical Methods in Education	3	Techniques for describing and summarizing data for educational research studies. Applications of the standard normal distribution and the use and interpretation of standard scores. Inferential statistics for one and two population studies including means, proportions, and correlations.
ERSH 8310	Applied Analysis of Variance Methods in Education	3	Experimental design and the analysis of data from experiments, including orthogonal analysis of variance for single and multifactor designs, randomized block, repeated measures, and mixed models. Computer applications and reporting results using APA style.
ERSH 8320	Applied Correlation and Regression Methods in Education	3	Nonexperimental and quasi-experimental research studies, including simple and multiple regression techniques, nonorthogonal analysis of variances, correlation techniques, and analysis of covariance.
ERSH 8350	Multivariate Methods in Education	3	Discriminant analysis, multivariate analysis of variance, canonical correlation analysis, and cluster analysis. Relating research questions to methods, conducting computer analyses, interpreting computer printouts, and critiquing analysis reports.
ERSH 8360	Categorical Data Analysis in Education	3	Categorical data analysis with emphasis on practical applications in educational research and on the use of computing packages for analysis of such data. Topics include contingency table analyses, generalized linear models, logistic regression, and loglinear models. These techniques are applied to data sets from educational research.
STAT 6210	Introduction to Statistical Methods I	3	First course on statistics emphasizing applications in social and behavioral sciences. Covers elementary topics, one and two sample inference, simple linear regression, some categorical data analysis. Uses point-and-click software.
STAT 6240	Sampling and Survey Methods	3	Design of finite population sample surveys. Stratified, systematic, and multistage cluster sampling designs. Sampling with probability proportional to size. Auxiliary variables, ratio and regression estimators, non-response bias.
STAT 6315	Statistical Methods for Researchers	4	Basic statistical methods through one- and two-sample inference, regression, correlation, one-way analysis of variance, analysis of covariance, and simple methods of categorical data analysis. The course emphasizes implementation and interpretation of statistical methods. Statistical software (SAS) is integrated into the course.
STAT 6430	Design and Analysis of Experiments	3	Theory and methods for constructing and analyzing designed experiments are considered. Basic concepts in the design of experiments, ANOVA, completely randomized designs, complete and incomplete block designs, cross-over designs, factorial designs, split-plot experiments, non-regular designs, designs for generalized linear models, online experiments, global optimization, computer experiments, and space-filling designs will be covered.
STAT 8090	Statistical Analysis of Genetic Data	3	Methods for analysis of genetic data, with an emphasis on gene mapping. Topics include quantitative genetics, covariance between relatives, estimation of genetic parameters, detection of genetic linkage in crosses and natural populations, association mapping, and QTL mapping. Emphasis on fitting models, estimating parameters, and making inferences based on genetic data.
STAT 8200	Design of Experiments for Research Workers	3	Methods for constructing and analyzing designed experiments are considered. Concepts of experimental unit, randomization, blocking, replication, and orthogonal contrasts are introduced. Designs include completely randomized design, randomized complete block design, Latin squares design, split-plot design, repeated measures design, and factorial and fractional factorial designs.
BIOS(STAT) 8220	Clinical Trials	3	Drug development and FDA approval procedures; randomization; blindness; phase I-IV clinical trials; multicenter trials; bioequivalency; sample size determination; design and analysis; cross-over design; repeated measurements design; survival analysis; meta-analysis.