

# Statistics and Analytics Master of Science

## Educational Statistics and Psychometrics Concentration Course Requirements

### Required Core Areas (12 hours)

#### **Statistical Methods Core** (One of the following)

- ESRM 6403 Educational Statistics and Data Processing

#### **Regression Analysis Core** (One of the following)

- ◇ ESRM 6423 Multiple Regression Techniques for Education
- ◇ INEG 5393 Applied Regression Analysis in Engineering

#### **Multivariate Analysis Core** (One of the following)

- ◇ ESRM 6453 Applied Multivariate Statistics
- ◇ STAT 5353 Methods of Multivariate Analysis

#### **Experimental Design Core** (One of the following)

- ◇ ESRM 6413 Experimental Design
- ◇ STAT 5373 Experimental Design
- ◇ INEG 5333 Design of Industrial Experiments

### Required Track Courses (9 hours)

- ◇ ESRM 6653 Measurement and Evaluation
- ◇ ESRM 5013 Research Methods in Education
- ◇ ESRM 6753 Item Response Theory

### Electives (9 hours)

Electives are chosen from the list below in consultation with the track advisor.

- ◇ ESRM 6513 Hierarchical Linear Modeling
- ◇ ESRM 6523 Structural Equations Modeling
- ◇ ESRM 6993 Seminar
- ◇ ECON 5613 Econometrics I
- ◇ ECON 6623 Econometrics II
- ◇ STAT 4373 Experimental Design
- ◇ STAT 5313 Regression Analysis
- ◇ ISYS 5723 Advanced Multivariate Analysis
- ◇ ISYS 5833 Data Management Systems
- ◇ ISYS 5843 Seminar in Business Intelligence and Knowledge Mgmt.
- ◇ STAN 600V Master's Thesis (total 6 hours)