

## Course Outcomes Guide (COG)

**Course Title:** MAT109 (3 Credits) INRO TO STATS  
MAT110 (1 Credit) STATS COMP APPS  
MAT 119 (4 Credits) INTRO TO STATS W/COMP APPS

**Date:** 9/9/11

**Course Team:** Tom Crawford, Joseph Mason, Richard Campbell

### Expected Learning Outcomes:

Upon successful completion of this course, students will learn:

1. develop skills needed to perform basic statistical and analytical procedures.
2. develop an understanding of the usefulness of probability and statistics in making decisions in everyday life.
3. have the ability to critically and constructively identify the role and evaluate the usefulness of data for decision making.
4. develop a repertoire of statistical methods needed for further study in probability and statistics.
5. gain knowledge in statistical software available. (MAT 110/119 ONLY)

### Assessment:

1. A common assessment is delivered to all students across all sections and delivery modes.
2. The assessment consists of 14 questions with an additional 4 questions administered exclusively to MAT110/119 students.
3. The assessment is delivered as a portion of each instructor's comprehensive final exam.

### Validation:

1. Common assessment results are evaluated only after final course grades are assigned by the instructor.
2. Correlation between overall score on common assessment and the assigned course grade is evaluated each semester.
3. Common assessment questions with dramatically high or low scores across multiple sections initiates a review of semester exam results to evaluate consistency.

### Results:

1. **Formal analysis of available common assessment results is needed.**
2. Current belief/speculation is that 119 students consistently outperform on the 14 questions the two courses have in common.

**Follow-up:**

1. Should belief/speculation hold up to analysis and it be concluded that the additional time on task and use of technology that is required of MAT119 students is strongly and positively correlated with student learning/achievement, then the following are resolved;
  - a. Sections of MAT109 should no longer be offered and they should be replaced with additional sections of MAT 119.
  - b. Required paperwork will be forwarded to the Shared Governance Curriculum Committee as quickly as practical in an effort to have this change finalized in time for development of the Fall 2012 schedule.
2. In view of the increased success rate in college algebra following the requirement that students spend time in the Mathematics Learning Center (MLC), this requirement will similarly be added to the MAT119 curriculum.

**Budget Justification:**

1. Increased consistency in the mode of content delivery will allow for increased efficiency in staffing, room assignment, and computer resource utilization.
  - a. Two courses delivering the same content requires two instructors the proposed change would permit fewer sections with larger enrollment.
  - b. Two simultaneous lecture sections will flip/flop lecture hall and computer instructional space.
2. Additional demands will be put on the Mathematics Learning Center which may present staffing concerns.