## **Evidence of Learning in a General Education Class**

| Evidence of Learning: PSY 3600   |  |  |   |   |   |  |
|--|--|--|---|---|---|--|
| Program Learning   | Measurable Learning  | Method of  | Findings Linked to  | Interpretation of   | Action Plan/Use of  |  |
| Goals  | Outcome  | Measurement  | Learning Outcomes   | Findings  | Results   |  |
| Students will  | Students will  | Direct and Indirect<br>Measures*   |   |   |   |  |
| Goal 1: Knowledge.  Explore the field of statistics, its different specializations and sub-areas, and methods used in research, teaching and practice. Areas covered include: measures of central tendency, variability, correlation, regression, hypothesis testing, z tests, t tests, ANOVA, MANOVA, chi-square analysis, disseminating information, computation, and statistical programming. | 1.A: Students will be able to describe and make use of critical facts (e.g. central limit theorem), concepts (e.g. hypothesis testing), and statistical processes (e.g., t-tests, z tests) in statistics, and classify their role in the theories and/or theoretical approaches, as well as application, in statistics  1.B: Students will be able to compute measures of variability, measures of central tendency, the product-moment correlation coefficient, a linear regression equation, and inferential statistics from an appropriate set of scores. | Measure 1: Between 20 and 50 MC/TF questions on 5 class exams.  Measure 2: Between 0 and 20 fill in the blank questions on 5 class exams.  Measure 3: Between 2 and 8 essays on 5 exams.  Measure 4: Between 5 and 10 computations on 5 exams.  Measure 5: Between 4 and 10 homework assignments, including computational statistical analysis.  Measure 6: Between 0 and 2 writing assignments.  Measure 1: Between 20 and 50 MC/TF questions on 5 class exams.  Measure 2: Between 0 and 20 fill in the blank questions on 5 class exams.  Measure 3: Between 2 and 8 essays on 5 exams. | Measure 1: (Ex. 93% of students scored 80% or better on 10 questions) | Measure 1: (Ex. Students successfully demonstrated interpretation skills) | Measure 1: (Ex. No curricular or pedagogical changes needed at this time) |  |

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| Goals   | Outcome   | Measurement  | Learning Outcomes  | Findings  | Results  |
| Students will   | Students will   | Direct and Indirect Measures*  Measure 4: Between 5 and 10 computations on 5 exams.  Measure 5: Between 4 and 10 homework assignments, including computational statistical analysis.  Measure 6: Between 0 and 2 writing assignments.  Measure 4: Two writing  |  |   |  |
| Goal 2: Application.  Apply concepts, theories, and knowledge of statistics to assess data using statistical reasoning. | 1A: Given a data set, students will be able to select the appropriate statistical test, use hypothesis testing to determine statistical significance and reach appropriate conclusions. | assignments.  Measure 1: Between 20 and 50 MC/TF questions on 5 class exams.  Measure 2: Between 0 and 20 fill in the blank questions on 5 class exams.  Measure 3: Between 2 and 8 essays on 5 exams.  Measure 4: Between 5 and 10 computations on 5 exams.  Measure 5: Between 4 and 10 homework assignments, including computational statistical analysis.  Measure 6: Between 0 and 2 writing assignments. | Measure 1: (Ex. 90% of students scored above national average) | Measure 1: (Ex. Students successfully demonstrated competence; lowest average score was in transfer of knowledge, where only 69% of questions were answered correctly | Measure 1: (Ex. Faculty agree to include review of transfer in all related courses; this outcome will be reassessed during next review |

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| Goals                          | Outcome  | Measurement   | Learning Outcomes  | Findings          | Results            |  |
| Goals Students will            | Students will  2B: Students will be able to conduct statistical analysis using computational techniques, as well as statistical computer programming, to analyze the data. | Direct and Indirect Measures*  Measure 1: Between 20 and 50 MC/TF questions on 5 class exams.  Measure 2: Between 0 and 20 fill in the blank questions on 5 class exams.  Measure 3: Between 2 and 8 essays on 5 exams.  Measure 4: Between 5 and | Learning Outcomes  | rinuligs          | Results            |  |
|                                |  | 10 computations on 5 exams.  Measure 5: Between 4 and 10 homework assignments, including computational statistical analysis.  Measure 6: Between 0 and 2 writing assignments.   |                    |                   |                    |  |

| Students will share key values adopted by psychologists with regard to statistics, including (but not limited to)   | 3A: Students will identify the probability of error in research, with the understanding that all research is inherently flawed to a certain extent and should be viewed with skepticism. Students will use this knowledge to interpret data sets and apply their knowledge. | Measure 1: Between 1 and 10 MC questions from 5 exams.  Measure 2: Between 1 and 4 essays from 5 exams. |  |  |
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| skepticism and intellectual curiosity, and humility regarding the limits of their psychological knowledge and skills. Students will also grasp the spirit of the APA Code of Ethics, follow its guidelines, and recognize the necessity of ethical behavior in all aspects of | 3B: Students will begin to recognize and adopt values consistent with assumptions of statistical reasoning.   | Measure 1: Between 1 and 10 MC questions from 5 exams.  Measure 2: Between 1 and 4 essays from 5 exams. |  |  |
| the science and<br>practice of<br>psychology.   |   |   |  |  |

| Goal 4: Communication  Students will exhibit skills to professionally communicate their understanding of terms, concepts, research, and theories of the discipline to others via written and oral formats. | Goal 1: Students will define the meaning of key statistical terms and concepts.   | Measure 1: Between 20 and 50 MC/TF questions on 5 class exams.  Measure 2: Between 0 and 20 fill in the blank questions on 5 class exams.  Measure 3: Between 2 and 8 essays on 5 exams.  Measure 4: Between 5 and 10 computations on 5 exams.  Measure 5: Between 4 and 10 homework assignments, including computational statistical analysis.  Measure 6: Between 0 and 2 writing assignments. |  |  |
|--|---|--|--|--|
|  | Goal 2: Student will be able to write short answers to direct questions about ideas in statistics.  Goal 3: Students will be able to write papers showing | Measure 1: Between 2 and 8 essays on 5 exams.  Measure 2: Between 0 and 2 writing assignments.  Measure 1: Between 0 and 2 writing assignments.  |  |  |
|  | to write papers showing understanding of statistical reasoning, application of knowledge, and analysis of a data set.                                     | writing assignments.   |  |  |