ASSESSMENT PLAN

Master of Industrial Statistics

Department of Statistics
College of Science and Mathematics
University of South Carolina
February, 2000

I. PROGRAM PURPOSES
The Master of Industrial Statistics program is geared toward persons who are currently working in a business, government, or industrial setting. While some theory is introduced, the focus is on applications of statistics and how statistics can be used to improve quality in an organization or process.

II. INTENDED LEARNING OBJECTIVES/OUTCOMES
The M.I.S. degree recipient should be able to...
1. Understand theory: understand elementary results in mathematical statistics and their relevance to statistical methods.
2. General methods: apply and interpret general statistical methods.
5. Standard Consulting: act as an independent consultant using standard methods with researchers in science, industry, business or government.
6. Basic computation: use existing statistical software and programming languages to solve standard problems.
7. General written communication: explain on paper results of standard statistical analyses to audiences not expert in statistics.
8. General oral communication: orally present results of statistical analyses to audiences not expert in statistics.

III. PROCEDURES, MEASURES, AND CRITERIA
1. Theory: candidates are required to pass theory courses STAT 702 and 703.
2. General Methods: candidates are required to pass courses STAT 704, 705, and 790, as well as at least 12 semester hours of electives which will typically be methods-oriented. In addition, the M.I.S. project will usually involve an investigation into a topic which requires application of statistical methods.
3. Methods in Statistical Quality Control: candidates are required to pass courses STAT 525, 506 and/or 706, and 750 and/or 761, all directly relevant to on-line or off-line quality control methods. In addition, the M.I.S. project will often involve an investigation into a topic which requires application of statistical methods for quality improvement or control.
4. Consulting: candidates are required to pass consulting seminar STAT 790. In addition, the M.I.S. project will often involve an investigation into a topic which requires collaboration with non-statisticians.
5. Computation: candidates are required to pass several courses which feature basic computing skills (e.g. STAT 704, 705 and methods-oriented electives). In addition, the statistical computing course STAT 517 is recommended and taken by many M.I.S. candidates. In addition, the M.I.S. project will often involve an investigation into a topic which requires at least the application of existing computer software for statistical methods.
6. Written Communication: candidates are required to write a project report, which requires general and possibly technical written communication skills. These are also topics in the consulting seminar STAT 790.
7. Oral Communication: General oral communication skills are topics in the consulting seminars STAT 790.

IV. IMPLEMENTATION
The Department of Statistics conducts an Exit Survey with each graduating M.I.S. student, in which the student is asked to assess his/her own abilities on each of the categories in section II above, as well as comment on the USC graduate program's strengths and weaknesses in general. The results are used to help make improvements in the program. First positions of graduates are kept on file, as well as reports of job changes, promotions, etc. Also, in January of each year, the Graduate Director prepares a summary report of assessment data, including
1. Scholastic information for all current candidates
2. Scholastic information for all graduates the previous year
V IMPLEMENTATION
Evaluation results from the Implementation Phase of this Assessment Plan will be featured in the Department’s Annual Report, the Strategic Plan (including any updates), the Department’s newsletters, and at other times deemed appropriate by the Department Chair or other University officials.

VI FEEDBACK CHANNELS
Assessment results and summaries will be circulated to program faculty at the annual Department retreat and at other times as deemed necessary by the Department Chair.

VII USE OF RESULTS
Use of results for program modification and the subsequent impact of any changes made will be reviewed yearly by the relevant faculty, and included in the Department’s Annual Report and Strategic Plan (including any updates).