WINONA STATE UNIVERSITY

COLLEGE OF SCIENCE AND ENGINEERING

DEPARTMENT OF MATHEMATICS AND STATISTICS

**Course Outline – STAT 395**

**Title:** Professional Skills Development for Statistics

**Number of Credits:** 3

**Catalog Description:** This course will develop skills necessary to become a working professional in the field of statistics. Students will critique, analyze, and evaluate several statistics research projects. A student’s presentation, writing, and professional skills will be enhanced in this course. Prerequisites: Completion of GEP GOAL 1 requirements, STAT 360 – Regression Analysis or STAT 365 – Experimental Design and Analysis, or permission of instructor. Offered yearly.

**Possible Textbooks:**

* Hering, L., Hering, H. (2010). How to Write Technical Reports. Springer-Verlag. ISBN: 978-3-540-69929-3
* Smith-Worthington, D., Jefferson, S., (2010). Technical Writing for Success. Cengage Learning. ISBN: 978-0-538-45048-5
* Gurak, L., Dragga, S., (2000). Presentations for Technical Communication. Alley & Bacon Publishing. ISBN:978-0-205-29415-2
* Nicol, A., Pexman, P. (2010). Displaying Your Findings: A Practical Guide for Creating Figures, Posters, and Presentations, 6th Edition. American Psychological Association. ISBN:978-0-433-80707-7

**Topics Covered:**

1. Capstone / Internship Requirement at Winona State University
   1. Expectations for capstone / internship experience
   2. Faculty to discuss potential project opportunities with students
   3. Encourage / assist in the coordination of REUs, internships, or other summer opportunities
2. Evaluation of past projects
   1. Critique, analyze, and evaluate completed undergraduate statistics projects
   2. Accessing online articles and utilizing library resources
   3. Common sources of data for projects
3. Presentation Skills
   1. Critique department seminar and colloquia presentations
   2. Critique, analyze, and evaluate project presentations using well-established rubrics
   3. Create and deliver presentation on assigned topics
4. Writing Skills
   1. Critique, analyze, and evaluate project writing samples using well-established rubrics
   2. Organization of content / outline construction
   3. Writing an abstract
   4. Writing appropriate conclusions
5. Self-Promotion
   1. Understanding the job market
   2. Putting together application materials
   3. Promoting yourself

**Listing of Sections to be Covered:** Not applicable to this course, since there is no standard textbook. Chosen sections of any text should correspond to the topics outlined above.

**Remarks:** None.

**Approximate Pace of Coverage:** Not Applicable.

**Method of Instruction:** The method of instruction for this course will be lecture and discussions.

**Evaluation Procedure:** Students will be asked to critique, analyze, and evaluate several completed statistics projects using appropriate rubrics. Students will gain experience in creating posters, presentations, and reports. All assessments should promote the development of professional skills.

**Minnesota Transfer Curriculum:** none

**MnSCU Learning Outcomes:**

* This course will promote a student’s ability to critique and analyze posters, presentations, and reports.
* This course will promote a student’s ability to evaluate and propose improvements to past posters, presentations, and written reports.
* This course will promote a student’s ability to create a poster suitable for a professional conference.
* This course will promote a student’s ability to orally present their research findings at a professional level.
* This course will promote a student’s ability to write reports at a professional level.

**Possible Computer Software:** None

**Last Revised:** Spring 2014 by the Statistics Subgroup.