**Course Number:** MA1900 **Course Title:** Statistical Literacy in Today’s Society

**Credits:** 3

**Current Catalog Description Including Prerequisites:**

Learn to interpret and evaluate reports in the media on studies of substance dependency, medical issues and other socio-cultural concerns. The goal is to learn to understand the statistics encountered in the news or in everyday life rather than to learn specific statistical techniques. Falls and Springs. Prerequisite(s): regular admission to Plymouth. (QRCO)

**General Education Designation:**

DirectionsConnections

Self & Society (SSDI)  Diversity (DICO)

Past & Present (PPDI)  Global Awareness (GACO)

Scientific Inquiry (SIDI)  Wellness (WECO)

Creative Thought (CTDI)  Integration (INCO)

Writing in the Discipline (WRCO)

Quantitative Reasoning in the Discipline (QRCO)  Technology in the Discipline (TECO)

**Review Guidelines:**

**Guidelines in Chapter 14 of the Gen Ed Handbook** [**https://psugened.pressbooks.com/chapter/renewal-of-general-education-status/**](https://psugened.pressbooks.com/chapter/renewal-of-general-education-status/)

**PROCESS:**

1. Please examine the course syllabus for each instructor who has taught the course since its last approval and attach the syllabus that seems most typical. Please be sure the syllabus includes the required items, which can be found @ <https://campus.plymouth.edu/center-for-transformation/learning/syllabus-checklist/>

1. Please attach summary statistics from the most recent course offering that focus specifically on General Education. Examine the data and discuss how the data aligns with stated course objectives.

MA1900: *Statistical Literacy in Today’s Society* fulfills the Quantitative Reasoning (QRCO) requirement. As stated in the attached syllabus, “this course focuses on real-life applications of quantitative reasoning, and provides students the opportunity, through research, to explore relevant connections between quantitative reasoning and their own major field of study.”

Review of the course evaluations for MA1900.01 demonstrates that students agreed that the course focused on the stated objectives. They agreed that the course addressed critical thinking (Q10), quantitative reasoning (Q12), and conducting research (Q15). The mean response for questions 22 through 25 was close to 4, indicating that most students agreed that the course taught quantitative reasoning skills that were relevant to their major studies and their lives.

Last semester, the other three sections of the course were taught by a teaching lecturer with limited undergraduate teaching experience. Review of the student evaluations did not show as strong an agreement between the general education objectives and students’ experiences. However, it is important to note that the sample size was very small – just 3 students in MA1900.02, 4 students in MA1900.03, and 5 students in MA1900.04 completed the evaluations. One concept that is covered in this course is the fact that voluntary response surveys, especially those with small sample sizes, are prone to bias and are thus unreliable sources of information.

Student evaluations currently do not measure a course or instructor’s success in instilling the “habits of mind” outlined in PSU’s General Education guidelines. However, this course is designed to promote and provide practice for all of these habits of mind: purposeful communication, problem solving, integrated perspective, and self-regulated learning. Students are challenged to work together to identify relevant social issues that concern them, and use research and quantitative reasoning to form a deeper understanding of these issues. They are not given formulas or answers in the back of the book – they are challenged to become creative problem-solvers and seek answers for themselves.

1. Please reflect upon your experience with the course and discuss how you have succeeded with, maintained, or improved the course in order to meet or exceed Gen Ed Program objectives.

This course distinguishes itself from MA2300 by focusing on understanding how statistics are used and reported in everyday life, rather than focusing on specific statistical techniques. Students are taught to think critically about data – where it comes from, how it was collected, and potential sources of bias. We have found that students are most engaged in this process if they are working with topics that they find relevant to their own lives and interests. Students have worked together to study diverse topics such as gun control, abortion, legalization of marijuana, the cost of higher education, climate change, the opioid epidemic, and more. They examine a wide variety of sources, learn to question their own biases, and use critical thinking techniques for analysis and reporting on their findings. The students frequently report that looking at numbers in a real-world context make them less “scary” when they are presented in a textbook with formulas and endless abstract practice problems.

If the sunset renewal application is approved, the math department will focus on improving the consistency of objectives and content between all sections of the course, whether taught by full-time faculty or teaching lecturers. Students should continue to be given the opportunity to conduct quantitative research into a current topic of their own choosing. Data is abundant in today’s society. This course gives students a chance to learn some of the basic tools for understanding and interpreting that data. This experience is most relevant to them if they are given freedom to explore topics that interest them.

**Discipline/Cluster/Counsel General Education Committee**

Vote: Vote:

11 In favor       In favor

      Opposed       Opposed

      Abstained       Abstained

1 Absent       Absent

Action: Action:

X Approved       Approved

      Not approved       Not approved

      Other       Other

The approval period is through

General Education Coordinator General Education Committee Chair

Date Date