Programs Goals and Learning Outcomes

Departmental Learning Goals				
Learning Goal 1	**Learning Goal 2**	**Learning Goal 3**	**Learning Goal 4**	**Learning Goal 5**
Engage students in sound mathematical thinking and reasoning.	Provide an environment that prepares students to read and learn mathematics on their own.	Explore multiple representations of concepts including graphical, symbolic, numerical, oral, and written.	Analyze the structure of real-world problems and plan solution strategies	Develop a mathematical vocabulary by expressing mathematical ideas orally and in writing.
Departmental Learning Outcomes				
Learning Outcome 1	**Learning Outcome 2**	**Learning Outcome 3**	**Learning Outcome 4**	**Learning Outcome 5**
				Students should be able to communicate mathematical ideas in written, oral, and/or electronic form using the appropriate mathematical language, notation, and style.

Quantitative Literacy Learning Outcomes

Learning Outcome 1	Learning Outcome 2	Learning Outcome 3	Learning Outcome 4	Learning Outcome 5	Learning Outcome 6
Students should be able to interpret Information a. Explain information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words).	Students should be able to represent Information a. Convert information into and between various mathematical forms (e.g., equations, graphs, diagrams, tables, words).	Students should be able to perform calculations a. Solve problems or equations at the appropriate course level. b. Use appropriate mathematical notation. c. Solve a variety of different problem types that involve a multi-step solution and address the validity of the results.	Students should be able to apply and analyze information a. Make use of graphical objects (such as graphs of equations in two or three variables, histograms, scatterplots of bivariate data, geometrical figures, etc.) to supplement a solution to a typical problem at the appropriate level. b. Formulate, organize, and articulate solutions to theoretical and application problems at the appropriate course level. c. Make judgments based on mathematical analysis appropriate to the course level.	Students should be able to communicate using mathematical forms a. Express mathematical analysis symbolically, graphically, and in written language that clarifies/justifies/summarizes reasoning (may also include oral communication).	Students should be able to address assumptions a. Describe and support assumptions in estimation, modeling, and data analysis, used as appropriate for the course

Statistics Learning (Course) Outcomes

The student should be able to	The student should be able to	The student should be able to	The student should be able to	The student should be able to	The student should be able to
	• construct graphical displays to summarize data.	• compute measures of center and measures of variation of data.	• analyze graphical displays to summarize data.	• interpret measures of center and measures of variation of data.	