

COURSE OUTCOME MATRIX

COURSE SYLLABUS

PART 2 of 3

Course Number and Title	MT225 Elementary Statistics
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Credit Hours	3
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Course Description	Students will solve problems applying concepts involving descriptive measures, elementary probability, and fundamental statistical inference procedures involving estimation and hypothesis testing to a variety of situations with wide applications. Students will learn about random sampling, confidence interval estimation, chi-square, regression analysis and correlation, and analysis of variance.
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Prerequisite(s) and/or Corequisite(s)	MT 121 or MT 121E or MT 123 or MT 124 or MT 124A or MT 128 or a minimum acceptable test score for placement in elementary statistics.
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Required Textbooks/References/Course Materials:

Beginning Statistics - Software and Ebook Access	3rd	Warren, Carolyn	Hawkes	1642772798
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	General Education Outcomes
1	Utilize written and verbal language to discuss and comprehend information, incorporating a variety of technologies, such as text, data, and images (written language, verbal language, and information technology).
2	Identify and interpret relevant information in order to formulate an opinion or conclusion (critical thinking).
3	Demonstrate and communicate computational methods and mathematical reasoning in a variety of formats (using words, tables, graphs, mathematical equations, etc., as appropriate) (quantitative literacy and fluency).
4	Communicate in appropriate ways with those who are culturally diverse (intercultural competence).

	Program/Department Outcomes
1	Develop the analytical and quantitative reasoning skills to communicate mathematical reasoning and apply mathematics in a variety of settings.
2	Use a variety of technological tools to collect, display, analyze, and communicate information symbolically, orally and in writing.
3	Use critical thinking and problem-solving skills in conjunction with a variety of models and methods in order to define, represent, and solve mathematical problems.
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	Course Outcomes (CO)	Bloom's Domain for CO (C, A, P), Category, and Level	Program/ Department Outcome(s)	Written Language	Verbal Language	Information Technology	Critical Thinking	Quantitative Literacy and Fluency	Intercultural Competence
1	Become critical consumers of statistically-based results reported in popular media, recognizing whether reported results reasonably follow from the study and analysis conducted.	C-Understanding (2)	1,2,3	1	0	0	1	1	0
2	Recognize questions for which the investigative process in statistics would be useful and should be able to answer questions using the investigative process.	C-Understanding (2)	1,2,3	1	0	0	1	1	0
3	Produce graphical displays and numerical summaries and interpret what graphs do and do not reveal.	C-Understanding (2)	1,2,3	1	0	0	1	1	0
4	Recognize and explain the central role of variability in the field of statistics.	C-Understanding (2)	1,2,3	1	0	0	1	1	0
5	Recognize and explain the central role of randomness in designing studies and drawing conclusions.	C-Understanding (2)	1,2,3	1	0	0	1	1	0
6	Gain experience with how statistical models, including multivariable models, are used	C-Understanding (2)	1,2,3	1	0	0	1	1	0
7	Demonstrate an understanding of, and ability to use, basic ideas of statistical inference, both hypothesis tests and interval estimation, in a variety of settings.	C-Understanding (2)	1,2,3	1	0	0	1	1	0
8	Interpret and draw conclusions from standard output from statistical software packages.	C-Understanding (2)	1,2,3	1	0	0	1	1	0
9	Demonstrate an awareness of ethical issues associated with sound statistical practice.	C-Understanding (2)	3	1	0	0	1	1	0
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Bloom's Domain Legend

C = Cognitive
A = Affective
P = Psychomotor

General Education Outcome Legend

2 = Included and Measurable
1 = Introduced and/or Minimally Addressed and Not Measurable
0 = Not included

Approved: October 14, 2021
Reviewed: November 5, 2021