EMPIRICAL AND QUANTITATIVE SKILLS

Focus Area		*If all content is taught in this area, please check the focus area for purposeful mapping.*			*Do not map.*
		[Instructor Teaches] Student Thoroughly Meets Expectations	*[Instructor Teaches] Student Adequately Meets Expectations*	*[Instructor Teaches] Student Minimally Meets Expectations*	*Does Not Apply to This Course*
Scientific Method	*[The instructor will teach and]* **Students will apply the Scientific Method to validate a hypothesis.**	The student thoroughly demonstrates the ability to apply the Scientific Method to validate a hypothesis.	The student adequately demonstrates the ability to apply the Scientific Method to validate a hypothesis.	The student minimally demonstrates the ability to apply the Scientific Method to validate a hypothesis.	The student does not minimally demonstrate the ability to apply the Scientific Method to validate a hypothesis.
	[The instructor will teach and] **Students will apply the Scientific Method to refute a hypothesis.**	The student thoroughly demonstrates the ability to apply the Scientific Method to refute a hypothesis.	The student adequately demonstrates the ability to apply the Scientific Method to refute a hypothesis.	The student minimally demonstrates the ability to apply the Scientific Method to refute a hypothesis.	The student does not minimally demonstrate the ability to apply the Scientific Method to refute a hypothesis.

This rubric is a tool for Chairs/Disciplines in completing Purposeful Mapping.

Focus Area		[Instructor Teaches] Student **Thoroughly** Meets Expectations	[Instructor Teaches] Student **Adequately** Meets Expectations	[Instructor Teaches] Student **Minimally** Meets Expectations	Does Not Apply to This Course
Quantitative Analysis	*[The instructor will teach and]* **Students will complete quantitative analysis through the utilization of appropriate arithmetic operations.**	The student thoroughly demonstrates the ability to complete quantitative analysis through the utilization of appropriate arithmetic operations.	The student adequately demonstrates the ability to complete quantitative analysis through the utilization of appropriate arithmetic operations.	The student minimally demonstrates the ability to complete quantitative analysis through the utilization of appropriate arithmetic operations.	The student does not minimally demonstrate the ability to complete quantitative analysis through the utilization of appropriate arithmetic operations.
	[The instructor will teach and] **Students will complete quantitative analysis through the utilization of appropriate algebraic operations.**	The student thoroughly demonstrates the ability to complete quantitative analysis through the utilization of appropriate algebraic operations.	The student adequately demonstrates the ability to complete quantitative analysis through the utilization of appropriate algebraic operations.	The student minimally demonstrates the ability to complete quantitative analysis through the utilization of appropriate algebraic operations.	The student does not minimally demonstrate the ability to complete quantitative analysis through the utilization of appropriate algebraic operations.
	[The instructor will teach and] **Students will complete quantitative analysis through the utilization of appropriate geometric operations.**	The student thoroughly demonstrates the ability to complete quantitative analysis through the utilization of appropriate geometric operations.	The student adequately demonstrates the ability to complete quantitative analysis through the utilization of appropriate geometric operations.	The student minimally demonstrates the ability to complete quantitative analysis through the utilization of appropriate geometric operations.	The student does not minimally demonstrate the ability to complete quantitative analysis through the utilization of appropriate geometric operations.
	[The instructor will teach and] **Students will complete quantitative analysis through the utilization of appropriate trigonometric operations.**	The student thoroughly demonstrates the ability to complete quantitative analysis through the utilization of appropriate trigonometric operations.	The student adequately demonstrates the ability to complete quantitative analysis through the utilization of appropriate trigonometric operations.	The student minimally demonstrates the ability to complete quantitative analysis through the utilization of appropriate trigonometric operations.	The student does not minimally demonstrate the ability to complete quantitative analysis through the utilization of appropriate trigonometric operations.
	[The instructor will teach and] **Students will complete quantitative analysis through the utilization of appropriate probabilistic operations.**	The student thoroughly demonstrates the ability to complete quantitative analysis through the utilization of appropriate probabilistic operations.	The student adequately demonstrates the ability to complete quantitative analysis through the utilization of appropriate probabilistic operations.	The student minimally demonstrates the ability to complete quantitative analysis through the utilization of appropriate probabilistic operations.	The student does not minimally demonstrate the ability to complete quantitative analysis through the utilization of appropriate probabilistic operations.
	[The instructor will teach and] **Students will complete quantitative analysis through the utilization of other relevant mathematical operations.**	The student thoroughly demonstrates the ability to complete quantitative analysis through the utilization of other relevant mathematical operations.	The student adequately demonstrates the ability to complete quantitative analysis through the utilization of other relevant mathematical operations.	The student minimally demonstrates the ability to complete quantitative analysis through the utilization of other relevant mathematical operations.	The student does not minimally demonstrate the ability to complete quantitative analysis through the utilization of other relevant mathematical operations.

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Focus Area		**[Instructor Teaches]** **Student _Thoroughly_ Meets Expectations**	**[Instructor Teaches]** **Student _Adequately_ Meets Expectations**	**[Instructor Teaches]** **Student _Minimally_ Meets Expectations**	**Does Not Apply to This Course**
Presentation	*[The instructor will teach and]* Students will present empirical and quantitative results in a variety of formats.	The student thoroughly demonstrates the ability to present empirical and quantitative results in a variety of formats such as tables, charts, graphs, maps, or equations.	The student adequately demonstrates the ability to present empirical and quantitative results in a variety of formats such as tables, charts, graphs, maps, or equations.	The student minimally demonstrates the ability to present empirical and quantitative results in a variety of formats such as tables, charts, graphs, maps, or equations.	The student does not minimally demonstrate the ability to present empirical and quantitative results in a variety of formats such as tables, charts, graphs, maps, or equations.
	[The instructor will teach and] Students will present empirical and quantitative conclusions in a variety of formats.	The student thoroughly demonstrates the ability to present empirical and quantitative conclusions in a variety of formats such as tables, charts, graphs, maps, or equations.	The student adequately demonstrates the ability to present empirical and quantitative conclusions in a variety of formats such as tables, charts, graphs, maps, or equations.	The student minimally demonstrates the ability to present empirical and quantitative conclusions in a variety of formats such as tables, charts, graphs, maps, or equations.	The student does not minimally demonstrate the ability to present empirical and quantitative conclusions in a variety of formats such as tables, charts, graphs, maps, or equations.

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