SCIENTIFIC LITERACY CORE LEARNING OUTCOME

Scientific Literacy. Students will create and assess hypotheses using research methods, interpret and express the results of observation and experimentation, understand the fundamental concepts of natural and social sciences, and apply scientific knowledge to situations common to daily life to promote physical and psychological well-being.

Rationale: The world is constantly changing with new developments in economics, the sciences (behavioral and natural), health, criminal justice, and technology. Literate Fayetteville State University graduates/citizens must have the ability to critically seek out, analyze, and interpret representative data. These skills will have a profound impact on the way they live, spend, and plan. Current research indicates there is a strong link between economics, the sciences (behavioral and natural), health, criminal justice, and technology. If FSU students are to become fully productive citizens, they should understand how these scientific and behavioral disciplines enable them to function successfully in an evolving society.

Rubric:

Scientific Literacy
Students will create and assess hypotheses using research methods, interpret and express the results of observation and experimentation, understand the fundamental concepts of natural and social sciences, and apply scientific knowledge to situations common to daily life to promote physical and psychological well-being.

	Create and assess hypotheses (Natural Science - 3 credit hrs)	**Recognize the role of observation and experimentation in the development of scientific theories; Interpret and express results of observation and experimentation (Natural Science- 4 credit hrs)**	**Understand fundamental scientific concepts (Natural/Social/Other - 3 credit hrs)**	**Apply scientific knowledge to situations common to daily life (All courses)**
Introduce	Identify stated hypotheses but may have difficulty generating own research questions/hypotheses	Recognize observation and experimentation as basis of scientific method; recognize major flaws in research	Describe basic concepts, descriptive terms, and important thinkers and ideas from at least one of the social/natural sciences to explain contemporary phenomena	Recognize and explain that scientific knowledge is relevant to situations common to daily life

Emphasize	Interpret and critique stated hypotheses; generate research questions or hypotheses for simple relationships or complex relationships that are logically consistent with existing information	Differentiate sound from flawed observation and experimentation; evaluate validity of research based upon available evidence; appraises the validity of findings of observation and experimentation; develops implications of strengths and weaknesses of methodology		Apply knowledge of theoretical frameworks, concepts, terms, and important thinkers and ideas to discuss contemporary phenomena, identifies perspectives of each discipline in explaining a particular event	Choose elements of scientific knowledge that are relevant to apply to particular situations common to daily life; evaluate scientific knowledge and construct strategies for applying it to situations common to daily life
Master	Design experiments to test hypotheses generated from	Conduct newly designed experiments		Create deep understanding of theoretical frameworks,	Synthesize new scientific knowledge based on interpretation of results obtained from

GUIDELINES FOR CORE CERTIFICATION IN SCIENTIFIC LITERACY

Core Certification in Scientific Literacy

To apply for Core Certification in Scientific Literacy, please list assessments, common to all sections of the course, that align with the listed facets of the learning outcome. The Learning Outcome and these assessments should be clearly listed in the syllabus. Two Natural Science courses should fulfill outcomes 1 and 2 at all levels: Introduce, Emphasize, and Master, whereas, all courses proposed should fulfill outcomes 3 and 4 at least at the Introduce level.

Course:_____

Outcome	Assessments demonstrating student learning
1. Create and assess hypotheses (Natural Science - 3 credit hours)	
2. Recognize the role of observation and experimentation in the development of scientific theories; Interpret and express results of observation and experimentation (Natural Science - 4 credit hours)	

3. Understand fundamental scientific concepts (Natural/Social/Other - 3 credit hours)	
4. Apply scientific knowledge to situations common to daily life (All courses)	