LOGICAL ANALYSIS & SCIENTIFIC REASONING CERTIFICATE

Undergraduate Upper Division Certificate
https://www.towson.edu/cla/departments/philosophy/undergrad/logical-analysis-scientific-reasoning-certificate.html

This UDC teaches competencies in the areas of philosophy that intersect with or support the STEM fields, with special emphasis on logic and the natural sciences. A required course in philosophical logic (PHIL 310) teaches how to use various formal systems in reasoning, with an eye towards their application in STEM contexts. The second required course (PHIL 319 or PHIL 320) explores various philosophical problems that arise in the sciences. And elective options cover various topics in epistemology, the history of "natural philosophy," and other areas where philosophy and science overlap.

At only 12 units (4 courses), this UDC is designed for STEM, Business majors, and any other curiosity-driven students who want to sharpen their reasoning skills, but don't have much space in their schedules. Students who complete the UDC will be able to show potential employers that, in addition to completing their primary course of study, they have also gained skills in the conceptual rigors of rational inquiry and problem-solving.

Requirements

The upper division certificate (UDC) in Logical Analysis & Scientific Reasoning requires 12 units of upper division coursework in select courses within the Philosophy curriculum.

Certificate Requirements

Code	Title	Units
Required Course		
PHIL 310	HOW TO THINK LOGICALLY: TOPICS AND METHODS IN FORMAL DEDUCTION & INDUCTION	3
PHIL 319	SCIENCE, TECHNOLOGY & VALUES	3
or PHIL 320	PHILOSOPHY OF SCIENCE	
Electives		
Select two additional courses from this list below:		6
PHIL 315	MIND AND CONSCIOUSNESS	
PHIL 328	EARLY MODERN PHILOSOPHY	
PHIL 333	ANALYTIC PHILOSOPHY	
PHIL 339	THEORIES OF KNOWLEDGE	
PHIL 342	WHAT MAKES US MORAL	
PHIL 380	PHILOSOPHICAL TOPICS (when topic is relevant to UDC, as determined by department chair)	
PHIL 495	RESEARCH TUTORIAL IN PHILOSOPHY (when topic is relevant to UDC, as determined by department chair)	
Total Units		**12**

Learning Outcomes

1. Effectively communicate complex and technical ideas in concise and precise language.
2. Critically evaluate arguments and evidence.
3. Combine approaches from science and philosophy to solve complex, interdisciplinary problems.