

COURSE DESCRIPTION

Dept., Number	Phil 508	Course Title	Symbolic Logic
Semester hours	3	Course Coordinator	Neil A. Manson, Assistant Professor

Current Catalog Description

Symbolic techniques used in formalizing the basic logical principles and in constructing rigorous proofs and demonstrations.

Textbooks

Paul Tomassi, *Logic*, Routledge, 1999.

Ian Hacking, *An Introduction to Probability and Inductive Logic*, Cambridge University Press, 2001.

Graham Priest, *An Introduction to Non-Classical Logic*, Cambridge University Press, 2001.

References

Course Outcomes

This course is a comprehensive survey of both deductive and inductive logic. Topics covered include propositional logic, quantificational logic, propositional modal logic, quantified modal logic, and the probability calculus. Upon successful completion of this course, the students:

1. understand the concepts and terminology of each logical system studied,
2. can use each logical system to carry out rigorous proofs and demonstrations.

Relationship between Course Outcomes and Program Outcomes

This symbolic logic course is accepted as an advanced elective in computer science for the BSCS students. However, it is a seldom used option.

The course outcomes contribute to program outcomes (a) and (j).

Prerequisites by Topic

This course has no explicit prerequisites.

Major Topics Covered in the Course

1. Propositional logic
2. Quantificational logic
3. Propositional modal logic
4. Quantified modal logic
5. Probability calculus

Assessment Plan for the Course

The instructor assesses the student performance related to the course outcomes by using examinations and homework assignments.

How Data in the Course are Used to Assess Program Outcomes (unless adequately covered already in the assessment discussion under Criterion 4)

The conduct of this course is not governed by the ABET program faculty. No data are collected that are used to assess program outcomes directly.

Estimate Curriculum Category Content (Semester hours)

Area	Core	Advanced	Area	Core	Advanced
Algorithms			Software design		
Data structures			Concepts of programming languages		