

PIU22021/22023 | Logic

Credits:	5 ECTS
Contact Hours:	
Lecture Hours	18
Tutorial Hours	4
Total	22
Pre-requisite:	None
Semester:	1
Module Leader and Lecturer	Professor John Divers
Contact E-mail:	diversj@tcd.ie
Room Number:	Arts Building 5008
Office Hours:	To be confirmed

Module Outline:

This course is an introduction to logic aimed at philosophy students. You will learn to apply methods and techniques that capture intuitive logical concepts such as argument-form, proof and validity.

For the most part we will be *doing* logic, which is to say working with systems of symbols as you would in very elementary (mid high school level) algebra. But towards the course we will consider philosophical issues such as the relationship between logical form and natural language and the known limits of formal (symbolic) methods.

Learning Outcomes On successful completion of this module, students will be:

- Able to use truth-tables to demonstrate validity, invalidity and other semantic features of formulas in propositional logic.

- Able to prove sequents and theorems in propositional logic and quantificational logic.
- Aware of the salient philosophical issues arising from the logic and metalogic of propositional and quantificational logics.

Recommended Reading List

This module will be taught from a single essential text:

Tomassi, P. *Logic* (Originally published by Routledge 1999 but all versions in the public domain are the same).

N.B. In the study of formal logic it is very important that you DO NOT consult other sources

Assessment:

2 online multiple-choice tests (25% + 25%) and 1 (end of module) Exam (50%).