PH136-15 Logic 1: Introduction to Symbolic Logic

23/24

Department
Philosophy
Level
Undergraduate Level 1
Module leader
Hemdat Lerman
Credit value
15
Module duration
9 weeks
Assessment
100% exam
Study location
University of Warwick main campus, Coventry

Description

Introductory description

PH136 - Logic 1: Introduction to Symbolic Logic

Module aims

To introduce students to first-order logic.

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

This module provides a study of formal logic, covering both propositional and first-order logic. We will study formal languages, which will allow us to define precise notions of logical validity, and to develop methods to establish the validity or invalidity of arguments. In particular, we will introduce a system of proof (of the natural deduction kind) which can be used to establish that an argument is valid. We will also learn how to translate English sentences into formal language ones and vice versa.

The module is based Barwise & Etchemendy: Language, Proof and Logic (CSLI publications, Stanford)

Learning outcomes

By the end of the module, students should be able to:

- Subject knowledge and understanding: students should be familiar with the notion of a logically valid argument and related notions; they should understand various ways to establish the logical validity or inavalidity of arguments.
- Key skills: students should be able to use logical notions and formal techniques in assessing arguments.
- Cognitive skills: students should be able to identify, construct and evaluate arguments.
- Subject-specific skills: students should be able to construct truth tables and formal proofs, and to discover and present counterexamples. Students should be familiar with a formal first-order language and capable of translating sentences to and from that language, including sentences involving identity and number.

Subject specific skills

- An understanding of the notion of logical validity and related logical notions.
- Enhancement of the ability to articulate and evaluate arguments with clarity and precision by enhancing (a) the ability to identify and articulate structural logical relations between English sentences, and (b) the ability to detect and articulate structural ambiguities in English.

Transferable skills

Enhancement of analytic skills, in particular the ability to: (a) articulate ideas and arguments with clarity and precision, (b) analyse and assess complex reasoning, (c) pay careful attention to detail.

Study

Study time

Type	Required
Lectures	9 sessions of 2 hours (12%)
Seminars	8 sessions of 1 hour (5%)
Private study	124 hours (83%)
Total	150 hours

Private study description

Private study.

Students are set weekly exercises on an online system. Feedback is provided online by the

system and by the seminar tutors, and further support is provided in the seminars.

Costs

No further costs have been identified for this module.

Assessment

You must pass all assessment components to pass the module.

Students can register for this module without taking any assessment.

Assessment group B9

	Weighting	Study time
In-person Examination	100%	

- Answerbook Gold (24 page)

Feedback on assessment

Feedback on examinations will be provided in the form of a summary report.

Past exam papers for PH136

Availability

Courses

This module is Core for:

- Year 1 of UPHA-VL78 BA in Philosophy with Psychology
- Year 1 of UHIA-V1V5 Undergraduate History and Philosophy
- UMAA-GV17 Undergraduate Mathematics and Philosophy
  - Year 1 of GV17 Mathematics and Philosophy
  - Year 1 of GV17 Mathematics and Philosophy
  - Year 1 of GV17 Mathematics and Philosophy
- UMAA-GV18 Undergraduate Mathematics and Philosophy with Intercalated Year
  - Year 1 of GV18 Mathematics and Philosophy with Intercalated Year
  - Year 1 of GV18 Mathematics and Philosophy with Intercalated Year
- UPHA-V700 Undergraduate Philosophy
  - Year 1 of V700 Philosophy
  - Year 1 of V700 Philosophy

This module is Core optional for:

- UIPA-V5L8 Undergraduate Philosophy and Global Sustainable Development
    - Year 1 of V5L8 Philosophy and Global Sustainable Development
    - Year 1 of V5L8 Philosophy and Global Sustainable Development

This module is Optional for:

- UECA-3 Undergraduate Economics 3 Year Variants
    - Year 1 of L100 Economics
    - Year 1 of L100 Economics
    - Year 1 of L100 Economics
    - Year 1 of L116 Economics and Industrial Organization
    - Year 1 of L116 Economics and Industrial Organization
- UECA-LM1D Undergraduate Economics, Politics and International Studies
    - Year 1 of LM1D Economics, Politics and International Studies
    - Year 1 of LM1D Economics, Politics and International Studies
- Year 1 of UHIA-V1V5 Undergraduate History and Philosophy
- Year 1 of USTA-G300 Undergraduate Master of Mathematics,Operational Research,Statistics and Economics
- Year 1 of USTA-G1G3 Undergraduate Mathematics and Statistics (BSc MMathStat)
- USTA-GG14 Undergraduate Mathematics and Statistics (BSc)
    - Year 1 of GG14 Mathematics and Statistics
    - Year 1 of GG14 Mathematics and Statistics
- USTA-Y602 Undergraduate Mathematics,Operational Research,Statistics and Economics
    - Year 1 of Y602 Mathematics,Operational Research,Stats,Economics
    - Year 1 of Y602 Mathematics,Operational Research,Stats,Economics
- Year 1 of UPHA-VQ52 Undergraduate Philosophy, Literature and Classics

This module is Option list B for:

- Year 1 of UMAA-G105 Undergraduate Master of Mathematics (with Intercalated Year)
- UMAA-G100 Undergraduate Mathematics (BSc)
    - Year 1 of G100 Mathematics
    - Year 1 of G100 Mathematics
    - Year 1 of G100 Mathematics
- UMAA-G103 Undergraduate Mathematics (MMath)
    - Year 1 of G100 Mathematics
    - Year 1 of G103 Mathematics (MMath)
    - Year 1 of G103 Mathematics (MMath)
- Year 1 of UMAA-G106 Undergraduate Mathematics (MMath) with Study in Europe
- Year 1 of UMAA-G1NC Undergraduate Mathematics and Business Studies
- Year 1 of UMAA-G1N2 Undergraduate Mathematics and Business Studies (with Intercalated Year)
- Year 1 of UMAA-GL11 Undergraduate Mathematics and Economics
- Year 1 of UECA-GL12 Undergraduate Mathematics and Economics (with Intercalated Year)
- Year 1 of UMAA-G101 Undergraduate Mathematics with Intercalated Year