School of Humanities and Languages

ARTS2375 Philosophical Logic
Semester 2, 2014

Convener & Lecturer:
Michaelis Michael
Philosophy@UNSW

Lectures CLB5  Fridays 12noon to 3pm

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### 1. Course Staff and Contact Details

<table>
<thead>
<tr>
<th>Name</th>
<th>Michaelis Michael</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room</td>
<td>Morven Brown rm 325</td>
</tr>
<tr>
<td>Phone</td>
<td>9385 2183</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:m.michael@unsw.edu.au">m.michael@unsw.edu.au</a></td>
</tr>
</tbody>
</table>

Consultation Time: Friday 10.30am – 11.30am

I am often in my office. Drop in and see me outside of these times if you want but be prepared for me to say that it is not a good time.

### 2. Course Details

<table>
<thead>
<tr>
<th>Units of Credit (UoC)</th>
<th>6</th>
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<tbody>
<tr>
<td>Course Description</td>
<td>ARTS2375 Philosophical Logic is an introduction to Logic. Logic is a wonderful achievement of the human mind. The development of logic as the study of argument and the way premises support conclusions was part and parcel of the development of philosophy. This is our attempt at reflecting on how we think, and our attempt to describe what it is to think well. The idea that human consciousness became self conscious in this way a little over two millennia ago is an inspiring and daunting realization. This subject introduces an important, enduring and growing part of philosophy. This subject will help you become more adept at analysing texts and constructing and analysing arguments. It also gives you the background to some of the most exciting developments in philosophy, mathematics and computer science. No prior background is assumed but students should normally have obtained at least 6 units of credit at Level 1 in Philosophy.</td>
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<table>
<thead>
<tr>
<th>Course Aims At the end of this course you should be able to</th>
<th>1. develop your ability to analyse arguments</th>
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<tbody>
<tr>
<td></td>
<td>2. understand the notion of a formal system</td>
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<tr>
<td></td>
<td>3. translate from English into a number of formal languages</td>
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<td></td>
<td>4. use formal translations to test for formal validity</td>
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<td>5. understand the difference between provability and validity</td>
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<td></td>
<td>6. understand the distinction between terms and predicates</td>
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<td></td>
<td>7. debate the strengths and weaknesses of various formal systems</td>
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<tr>
<td></td>
<td>8. use truth tables to define connectives you can then investigate</td>
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<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>1. Formulate, analyse, and respond critically to the problems, arguments, and positions covered in the course.</th>
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<tbody>
<tr>
<td></td>
<td>2. Display skills associated with scholarly inquiry in the discipline of philosophy, particularly information literacy and critical analysis skills</td>
</tr>
<tr>
<td></td>
<td>3. translate from English into a number of formal languages</td>
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</tbody>
</table>
3. Learning and Teaching Rationale and Teaching Strategies

First, the teaching strategies used encourage analytic and critical thinking skills, as well as the skills of effective communication. You are encouraged to express and refine your own views of the topics discussed, and engage with the complexities of various approaches to philosophical problems.

Second, the content of the course encourages the development of a respect for diversity and intellectual fair-play, as you are required to engage deeply with viewpoints that you may strongly disagree with.

Third, the assessment package in the course is designed to allow you to develop analytic and critical thinking skills, research skills, and effective communication skills. It also allows you to enhance your ability to engage in creative problem solving and independent learning.

4. Teaching Strategies

We will have a mixture of lectures and in class worked cases so you will have “hands on” experience with the logical systems we investigate.

5. Course Assessment

<table>
<thead>
<tr>
<th>Assessment Task</th>
<th>Length</th>
<th>Weight</th>
<th>Learning Outcomes Assessed</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Quiz</td>
<td>One hour</td>
<td>15%</td>
<td>1, 2</td>
<td>Week 3</td>
</tr>
<tr>
<td>Class Test</td>
<td>Two hours</td>
<td>35%</td>
<td>1, 2, 3</td>
<td>Week 6</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Three hours</td>
<td>50%</td>
<td>1, 2, 3</td>
<td>Exam Period</td>
</tr>
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</table>

Note on Class Tests and Final Exam

The Class Tests and the Final Exam in this subject are open book format. You may bring any written or printed material you want to into the Class Tests and Final Exam and may refer to such material freely. You may not bring electronic devices into the Class Tests and Final Exam.

It is NOT the aim of the tests and exam to test your memory. Rather, the aim is to test whether you have understood the material.

With that in mind, the questions will presume that you have access to all the material handed out in the class. You may bring any printed or written material you like into the tests and exam.

No electronic devices may be used.

Please Note: In addition to fulfilling the above assessment requirements, students are expected to attend at least 80% of their lectures and tutorials in order to pass the course.

Formal Examination

This course has a formal examination which will be scheduled in the formal examination period from 7 – 22 November 2014. Students are expected to give their studies priority and this includes making themselves available for the entire examination period. Travel commitments made prior to the publication of the final examination timetable are not a valid reason for alternate assessment.
Grades

All results are reviewed at the end of each semester and may be adjusted to ensure equitable marking across the School.

The proportion of marks lying in each grading range is determined not by any formula or quota system, but by the way that students respond to assessment tasks and how well they meet the objectives of the course. Nevertheless, since higher grades imply performance that is well above average, the number of distinctions and high distinctions awarded in a typical course is relatively small. At the other extreme, on average 6.1% of students do not meet minimum standards and a little more (8.6%) in first year courses. For more information on the grading categories see https://my.unsw.edu.au/student/academiclife/assessment/GuideToUNSWGrades.html

6. Attendance/Class Clash

Attendance

Students are expected to be regular and punctual in attendance at all classes in the courses in which they are enrolled. Explanations of absences from classes or requests for permission to be absent from classes should be discussed with the teacher and where applicable accompanied by a medical certificate. If students attend less than 80% of their possible classes they may be refused final assessment.

Students who falsify their attendance or falsify attendance on behalf of another student will be dealt with under the student misconduct policy.

Class Clash

A student who is approved a permissible clash must fulfil the following requirements:

a. The student must provide the Course Convenor with copies of lecture notes from those lectures missed on a regular basis as agreed by the Course Convenor and the student.

b. If a student does attend a lecture for which they had secured a permitted clash they will still submit lecture notes as evidence of attendance.

c. Failure to meet these requirements is regarded as unsatisfactory performance in the course and a failure to meet the Faculty’s course attendance requirement. Accordingly, Course Convenors will fail students who do not meet this performance/attendance requirement.

d. Students must attend the clashed lecture on a specific date if that lecture contains an assessment task for the course such as a quiz or test. Inability to meet this requirement would be grounds for a Course Convenor refusing the application. If the student misses the said lecture there is no obligation on the Course Convenor to schedule a make-up quiz or test and the student can receive zero for the assessment task. It should be noted that in many courses a failure to complete an assessment task can be grounds for course failure.
7. Academic Honesty and Plagiarism

Plagiarism is presenting someone else’s thoughts or work as your own. It can take many forms, from not having appropriate academic referencing to deliberate cheating.

In many cases plagiarism is the result of inexperience about academic conventions. The University has resources and information to assist you to avoid plagiarism.

The Learning Centre assists students with understanding academic integrity and how to not plagiarise. Information is available on their website: [http://www.lc.unsw.edu.au/plagiarism/](http://www.lc.unsw.edu.au/plagiarism/). They also hold workshops and can help students one-on-one.

If plagiarism is found in your work when you are in first year, your lecturer will offer you assistance to improve your academic skills. They may ask you to look at some online resources, attend the Learning Centre, or sometimes resubmit your work with the problem fixed. However, more serious instances in first year, such as stealing another student’s work or paying someone to do your work, may be investigated under the Student Misconduct Procedures.

Repeated plagiarism (even in first year), plagiarism after first year, or serious instances, may also be investigated under the Student Misconduct Procedures. The penalties under the procedures can include a reduction in marks, failing a course or for the most serious matters (like plagiarism in an Honours thesis) or even suspension from the university. The Student Misconduct Procedures are available here: [http://www.gs.unsw.edu.au/policy/documents/studentmisconductprocedures.pdf](http://www.gs.unsw.edu.au/policy/documents/studentmisconductprocedures.pdf)

**TEXTBOOK**

*The textbook “An Introduction to Philosophical Logic” by Michaelis Michael will be available for free download on the Moodle site. This is designed to fit with this course and has many exercises, many with answers. You will need to print this ebook since you will find it useful to have this book available for the exams.*
8. **Course Schedule**  
*To view course timetable, please visit:*  
http://www.timetable.unsw.edu.au/

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
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| 1    | Aug 1st | Introduction Arguments/Sentences/Premises/Conclusions  
Deductive arguments/Inductive arguments/default reasoning  
Formal systems as a model of our language/testing formal models  
Validity of Arguments  
Beginning Aristotle’s Syllogistic logic |
| 2    | Aug 8th | The Square of Opposition  
Aristotle and ontological commitment  
Validity testing by Venn Diagram  
Limitations of Syllogistic Logic  
Aristotle and the Stoics |
| 3    | Aug 15th | Stoic Logic – the connections to epistemology and propositional logic  
Propositional Logic $L$ – Syntax and Defining the notion of Proof  
The cases of conjunction and the conditional  
CLASS QUIZ |
| 4    | Aug 22nd | Propositional Logic $L$  
The cases of disjunction and negation |
| 5    | Aug 29th | Propositional Logic $L$ – More on Proof |
| 6    | Sept 5th | CLASS TEST [Covering all material from Weeks 1-5] |
| 7    | Sept 12th | Semantics for $L$ – using truth-tables to test for validity |
| 8    | Sept 19th | Soundness Theorem for $L$  
What is Completeness? What is Soundness? Meaning and Proof. |
| 9    | Proof  
Sept 26th | Predicate Logic  
-- Syntax of $QL$ and $QL_e$ and the notion of Proof |
| 10   | Oct 10th | Predicate Logic  
The rules of proof |
| 11   | Oct 17th | Predicate Logic  
The Semantics |
| 12   | Oct 24th | A View Beyond |
CHECK THE WEEK BY WEEK SECTION OF MOODLE SITE FOR PAGES COVERED OF TEXTBOOK EACH WEEK.

9. Course Resources

Textbook Details
An ebook version of the Textbook will be made available for download on Moodle.

10. Course Evaluation and Development

Courses are periodically reviewed and students’ feedback is used to improve them. Feedback is gathered using various means including UNSW’s Course and Teaching Evaluation and Improvement (CATEI) process.

11. Student Support

The Learning Centre is available for individual consultation and workshops on academic skills. Find out more by visiting the Centre’s website at:
http://www.lc.unsw.edu.au

12. Grievances

All students should be treated fairly in the course of their studies at UNSW. Students who feel they have not been dealt with fairly should, in the first instance, attempt to resolve any issues with their tutor or the course convenors.

If such an approach fails to resolve the matter, the School of Humanities and Languages has an academic member of staff who acts as a Grievance Officer for the School. This staff member is identified on the notice board in the School of Humanities and languages. Further information about UNSW grievance procedures is available at:
https://my.unsw.edu.au/student/atoz/Complaints.html

13. Other Information

myUNSW

myUNSW is the online access point for UNSW services and information, integrating online services for applicants, commencing and current students and UNSW staff. To visit myUNSW please visit either of the below links:
https://my.unsw.edu.au
https://my.unsw.edu.au/student/atoz/ABC.html

OHS

UNSW’s Occupational Health and Safety Policy requires each person to work safely and responsibly, in order to avoid personal injury and to protect the safety of others. For all matters relating to Occupational Health, Safety and environment, see http://www.ohs.unsw.edu.au/
Special Consideration

In cases where illness or other circumstances produce repeated or sustained absence, students should apply for Special Consideration as soon as possible.

The application must be made via Online Services in myUNSW. Log into myUNSW and go to My Student Profile tab > My Student Services channel > Online Services > Special Consideration.

Applications on the grounds of illness must be filled in by a medical practitioner. Further information is available at: https://my.unsw.edu.au/student/atoz/SpecialConsideration.html

Student Equity and Disabilities Unit

Students who have a disability that requires some adjustment in their learning and teaching environment are encouraged to discuss their study needs with the course convener prior to or at the commencement of the course, or with the Student Equity Officers (Disability) in the Student Equity and Disabilities Unit (9385 4734). Information for students with disabilities is available at: http://www.studentequity.unsw.edu.au

Issues that can be discussed may include access to materials, signers or note-takers, the provision of services and additional examination and assessment arrangements. Early notification is essential to enable any necessary adjustments to be made.