University of Reading

DRAFT

PP1MM: Mental Machines

Module title: Mental Machines

Module code: **PP1MM**
Level: 4
Terms in which taught: Summer

Providing School/Dept: Philosophy
Number of credits: 10
Number of ECTS credits: 5

Module convenor: **James Stazicker**

Other teaching staff: Graduate TAs

Pre-requisites: None
Modules excluded: None

Co-requisites: None

Maximum number of students: n/a

Current from: Summer 2016

Summary module description:

This module investigates the possibility, the promise and the perils of thinking machines. How close are we to creating artificial intelligence (AI), and what fundamental obstacles does the project of AI still face? How will AI change the world, and how afraid should we be of the Singularity - the point at which machines become more intelligent than humans, and design exponentially more intelligent machines without us? Where does the mind stop and machinery start? For example, could a neural implant or even a smartphone form part of your mind? Are we ourselves thinking machines, in the form of intelligent, naturally occurring computer programs? If so, could humans learn to upload their minds and live beyond brain death? These are all serious philosophical questions, and we will investigate them by reading the works of contemporary philosophers such as David Chalmers, Andy Clark, Hubert Dreyfus and John Searle, as well as scientists such as Susan Greenfield.

Aims:

Students in this module will learn to engage knowledgeably, critically and rigorously with the complex and pressing issues about artificial intelligence which face contemporary society. They will learn how the tools of philosophy can illuminate scientific problems, and they will be introduced to some central questions in philosophy of mind. They will learn to formulate precise arguments about these problems and questions, both orally and in writing. This module will prepare students for further Philosophy modules at Parts 2 and 3, by developing critical skills required in all Philosophy modules, as well as through subject knowledge which will be especially helpful in Philosophy of mind (PP2MIN) and Philosophy of cognitive science (PP3COG).

Intended learning outcomes:

Assessable outcomes
Students in this module will acquire subject knowledge in the philosophy of mind and artificial intelligence, by engaging with cutting-edge research in these disciplines. In addition, they will learn the skill of formulating precise, convincing philosophical arguments about scientific problems. They will learn how to communicate these arguments effectively in discussion and in writing, and how to criticise such arguments effectively and constructively, engaging effectively with their peers. Finally, in-class presentations will give students a chance to learn about presenting themselves and their ideas effectively.

Additional outcomes
Students in this module will develop an appreciation of how philosophy can engage effectively with the sciences, and of an appreciation of how philosophy can engage effectively with pressing practical issues facing society the world over. Students will be exposed to written work in diverse philosophical and scientific styles and traditions, learning how to translate efficiently between them.

Outline content:
The module begins with some recent achievements in work on artificial intelligence, before assessing John Searle's 'Chinese Room' argument that no computer program could be sufficient for intelligence, along with Hubert Dreyfus' criticisms of the idea that machines might think (Weeks 1-2). In Week 3, we turn to the question whether we humans are ourselves thinking machines, in the form of intelligent, naturally occurring computer programs. In Week 4, we assess Andy Clark and David Chalmers' thesis that technological aids to cognition which lie outside the brain might nonetheless form parts of one's mind. Finally, in Week 5, we assess the perils of artificial intelligence, by reference to Chalmers' work on the Singularity and scientists' responses to his argument.

Global context (where appropriate)

Brief description of teaching and learning methods:
The module is taught by lectures and seminars. Students are expected to attend 10 hours of lectures and 5 hours of seminars during the term in which it is provided. Lectures include the presentation of some material by video, as well as traditional lecturing by the module convenor. Seminars include student presentations, as well as discussion among multiple students. All students are required to write one module essay from a list of questions supplied by the module convenor, and to give one seminar presentation. Students are encouraged to be active in all classes, asking questions and trying to answer the questions posed by others. Reading, handouts and other study aids will be available via Blackboard.

Contact hours

	Autumn	Spring	Summer
Lectures			10

Seminars			5
Tutorials			
Project supervision			
Demonstration			
Practical classes and workshops			
Supervised time in studio/workshop			
Fieldwork			
External visits			
Work-based learning			
Guided independent study			85
Placement			
Year abroad			
Total hours			
Grand total hours			100

Summative Assessment Methods (%) - work which always contributes towards the overall module mark:

	%
Written exam	
Written assignment, including essay	70
Report	
Dissertation	
Portfolio	
Project output (other than dissertation)	
Oral assessment and presentation	30
Practical skills assessment	
Set exercise	

Class test administered by School	

Formative Assessment Methods - work which provides opportunities to improve performance (e.g. through feedback provided) but which does not necessarily always contribute towards the overall module mark:
Students will have the opportunity to submit draft work for both their presentations and their written assignment.

Penalties for late submission
Penalties for late submission will be in accordance with University policy.

Length of final examination
N/A

Requirements for a pass
A mark of 40% overall

Reassessment arrangements

Written coursework only. Students who fail at the first attempt will have the opportunity to submit a second attempt at their written coursework in September. This is to include no work which has previously been marked.