

Philosophy 220—Incompleteness and Inconsistency

Spring, 2007

T, Th 10:30-10:20, Dewey 104

Jay L. Garfield, Dewey House, Front Parlor

Office Hours: T, Th, 9:30-10:30 or by appt

Phone: 585-3649

jgarfield@smith.edu

Required Texts:

At Grécourt Bookstore:

D Hofstadter, *Gödel, Escher, Bach*

G Priest, *Beyond the Limits of Thought*

G. Priest, *In Contradiction*

There are also papers available on the Moodle site for the course.

This course explores the ideas of incompleteness and inconsistency and the philosophical implications of the limitative results of Nineteenth and twentieth Century logic. We will be particularly interested in the relationship between incompleteness and inconsistency and the choice between accepting one or the other, in the role of paradoxes and of the idea of completeness in the history of philosophy and in the possibility that the world and our knowledge of it are fundamentally either incomplete or inconsistent. The first half of the course will be devoted to the exploration of incompleteness, isomorphism, the fundamental properties of formal systems and the philosophical implications of Gödel's incompleteness theorems. The second half of the course will be devoted to the examination of the possibility that accepting inconsistency provides a viable alternative to the acceptance of incompleteness and that the world is in fact inconsistent.

All students are expected to attend class regularly, to participate in class discussion, to complete all assigned reading prior to the class session in which it is to be discussed, to participate in Moodle discussion fora and to come to class prepared with questions raised by the reading. All students will complete two 8-10 page essays (on topics of your choice, raised by each section in the course) and to complete two short, assigned exercises. I always welcome rough drafts of papers, which can be submitted through the Moodle website. I guarantee that I will return all rough drafts or outlines with comments within two days. All work is to be handed in on time unless an extension is arranged prior to the due date. I cannot guarantee either prompt return or feedback on work handed in late.

Grades will be determined as follows:

Papers: 30% each

Exercises: 15% each

Class and Moodle Participation: 10%

Schedule of Readings and Written Work:

Date	Topic	Text	Written Work
Introductory			
1/30	Introductory		
2/1	Isomorphisms	<i>GEB</i> I-III	
Part I: Incompleteness			
2/6	Consistency & Completeness	<i>GEB</i> IV	
2/8	Recursion	<i>GEB</i> V	
2/13	Logic and Meaning	<i>GEB</i> VI	
2/15	Arithmetic and Representation	<i>GEB</i> VII-VIII	
2/20	Interlude and Gödel numbering	<i>GEB</i> IX	
2/22	Recursion and Diagonalisation	<i>GEB</i> XIII	
2/27	Gödel's Theorem I	<i>GEB</i> XIV	<i>First Exercise</i>
3/1	Gödel's Theorem II	<i>GEB</i> XV,	
3/6	Church, Turing and Tarski	<i>GEB</i> XVII	
3/8	The Second theorem	Boolos article	
3/13	Gödel and Mind I	Bowie and Tymoczko articles	
3/15	Gödel and Mind II	McCall and George & Velleman articles	
Part II: Inconsistency			
3/27	Living With Contradictions	<i>BLT</i> intro, <i>IC</i> Intro, 1, 2	
3/29	Expression and Iteration	<i>BLT</i> 1, 2I	<i>Midterm Paper</i>
4/3	Cognition and Conception	<i>BLT</i> 3,4	
4/5	Gödel reprise	<i>IC</i> 3	
4/10	Kant	<i>BLT</i> 5,6	
4/12	Dialethic Logical Theory	<i>IC</i> 4-7	<i>Second Exercise</i>
4/17	Hegel	<i>BLT</i> 7	
4/19	Classical Recapture and Language	<i>BLT</i> 8,9 <i>IC</i> 8-9, 16	
4/24	Inconsistent Set Theory	<i>BLT</i> 10, 11, <i>IC</i> 10, 17, 18	
4/26	Applications of <i>LP</i>	<i>IC</i> 11-13, 15	
5/1	Limits of Language	<i>BLT</i> 12-14	
5/3	The Postmodern Predicable	<i>BLT</i> 15-17, <i>IC</i> 20	
5/16	-----	-----	<i>Final Paper</i>