



UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO
PROGRAMA DE POSGRADO EN
FILOSOFÍA DE LA CIENCIA



Actividad Académica: Topics in the History and Philosophy of Logic. Profs. Estrada-González and Marshall				
Clave:		Semestre: 2023-2		
Campo de conocimiento: FMLC, FC				
Carácter: Obligatoria () Optativa (X) de Elección ()			Horas por semana	
Tipo:			Teóricas:	Prácticas:
			4	
Modalidad: Presencial			Horas al semestre	
			64	
			No. Créditos:	
			8	
Duración del programa: 1 semestre				

Seriación: Sí () No (x) **Obligatoria** (X) **Indicativa** ()

Introducción:

Logic and philosophy inform each other in various ways. Philosophy involves the search for clarity. Philosophical reflection can reveal the need to develop logical tools, which are then used to make philosophical positions more precise. One way of clarifying our understanding is conceptual analysis, which has been most successful when used to define concepts in a logico-mathematical framework.

Objetivo general:

We will analyze various important texts to see how logic and philosophy inform each other in ancient philosophy, as well as in both the analytic and non-analytic traditions.

Objetivos específicos:

We begin with Strawson’s *Analysis and Metaphysics*. We consider Strawson’s idea that a proper goal of descriptive metaphysics is to understand the *structure of basic common notions* required for us to reason about the objective world. We will discuss which notions should be considered part of this structure — those of *object, property, relation, collection, sequence, function, quantifier* etc.— and their connection to more theoretical notions from science and mathematics.

Turning to Heidegger, we will read his short work *What is Metaphysics?*, with some help from the introduction to his *Being and Time*. Then we will read Aristotle, with a particular focus on the role of deduction in the life of a citizen. We will also look at his theory of the basic organization of scientific thinking in *Posterior Analytics*, which is probably also reflected in Euclid’s *Elements*, paying attention to his distinction between notions and axioms that are specific to a particular discipline and those that are common to all.

Beginning our historical survey of the analytic tradition, we will discuss the paradox of analysis, the Fregean solution to it and Frege’s rather expansive conception of analysis, which is much more theoretically informed than the ordinary language “Oxford” conception. To understand Frege’s conception and how this is informed by logic, we will look at the logic of relations in his *Begriffsschrift* and how he uses it in *Begriffsschrift*, as well as in *Grundlagen der Arithmetik*, to analyze the notion of a natural number. We will also look at the treatments of equality in *Begriffsschrift* and in *Über Sinn und Bedeutung* as well as at his famous distinctions between *Sinn* and *Bedeutung* (sense and denotation) and function and

argument.

Next, we will turn to Church's *Introduction to Mathematical Logic*, chapter 0. In this, Church explains how his presentation of formal logic is a crystallization of Frege's method but with explicit formalization, (Hilbert's) distinction between object and metalanguage, and varying interpretations of the object language. We will discuss how Church nevertheless weaves Fregean philosophy into his presentation of formal logic.

Finally, we look at Church, Quine and Strawson's use of formal logic to discuss topics in basic metaphysics such as ontological commitment.

If there is sufficient interest, we may consider continuing the seminar in future semesters. Other related topics include Frege and Strawson on presupposition, Saul Kripke's challenges to Frege, Church, Quine and Strawson, the proper role in logic and philosophy of rigidity and modality—which these earlier authors may have overlooked—and Kripke's (unpublished) arguments that the notion of an object persisting over time is basic and not susceptible to analysis.

Contenido Temático			
Unidad	Temas	Horas	
		Teóricas	Prácticas
1	Analysis and metaphysics (I): Strawson	8	
2	Analysis and metaphysics (II): Heidegger	10	
3	Aristotle: logic for scientific thinking	6	
4	Aristotle: logic for life	8	
5	Frege's notion of analysis	10	
6	Church's notion of analysis	10	
7	Ontological commitment	12	
Total de horas:		64	
Suma total de horas:			64

Bibliografía y actividades:

Aristotle, extracts from *Topics*, *Nicomachean Ethics* VI, *Posterior Analytics*

Euclid, extracts from *Elements*.

Heidegger, *What is Metaphysics?*, extracts from *Being and Time*

Frege, extracts from *Begriffsschrift*, *Grundlagen der Arithmetik*, *Über Sinn und Bedeutung*

Carnap, *Overcoming Metaphysics through the Logical Analysis of Language*

Church, extracts from *Introduction to Mathematical Logic*, *Intensional Semantics: The Need for Abstract Entities in Semantical Analysis*, *Ontological Commitment*

Strawson, extracts from *Analysis and Metaphysics*.

Medios didácticas:	Métodos de evaluación:
Exposición profesor(a) <input checked="" type="checkbox"/>	Exámenes o trabajos parciales <input checked="" type="checkbox"/>
Exposición alumnos <input type="checkbox"/>	Examen o trabajo final escrito <input checked="" type="checkbox"/>
Ejercicios dentro de clase <input type="checkbox"/>	Trabajos y tareas fuera del aula <input type="checkbox"/>
Ejercicios fuera del aula <input type="checkbox"/>	Exposición de alumnos <input checked="" type="checkbox"/>
Lecturas obligatorias <input checked="" type="checkbox"/>	Participación en clase <input checked="" type="checkbox"/>
Trabajo de investigación <input checked="" type="checkbox"/>	Asistencia <input type="checkbox"/>
Prácticas de campo <input type="checkbox"/>	Prácticas <input type="checkbox"/>
Otros: _____ <input type="checkbox"/>	Otros: _____ <input type="checkbox"/>

Evaluación y forma de trabajo

Imparte:

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Día y hora del curso o seminario (dos propuestas):

Ju y Vi, 10-12 hrs