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

Actividad Académica: **Topics in the Nature of Semantic Content: Insights from Theoretical Computer Science**					
Clave:	**Semestre: 2024-1**	**Campo de conocimiento: Seminario de temas selectos**			
Carácter: Obligatoria ( ) Optativa (X) de Elección ( )		**Horas por semana**		**Horas al semestre**	**No. Créditos: 8**
Tipo:		**Teóricas:** 4	**Prácticas:**	64	
Modalidad: Presencial	**Duración del programa: 1 semestre**				

Seriación: **Si ( )** **No (x)** **Obligatoria (x)** **Indicativa ( )**

Introducción:
Alonzo Church (1903-1995) was a renowned mathematical logician, philosophical logician, philosopher, teacher and editor. He was one of the founders of the subject of mathematical logic as it developed after Cantor, Frege, and Russell. He was also one of the principal founders of the Association for Symbolic Logic and the Journal of Symbolic Logic. Although not a computer scientist, Church developed ideas that are of enormous importance to theoretical computer science in the form of his lambda calculi. In addition to being used in computer science, computability theory and the foundations of mathematics, these ideas are used in the study of natural language semantics and intensional logic, where they were first applied by linguists like Barbara Partee, Irene Heim and Angelika Ktrazter, and by philosophers of language like Nathan Salmón and Scott Soames. More recently, linguists like Chris Barker and philosophers like Jim Pryor have also begun to apply more recent discoveries in theoretical computer science to natural language semantics and intensional logic.

Objetivo general:
The goal of the seminar will be to develop a simple and unified approach to a number of issues in logic, philosophy and linguistics using insights from theoretical computer science and their origins in the work of Alonzo Church. The point of a unified approach is, of course, to solve various problems with the same apparatus.

Objetivos específicos:
Drawing on work by Nathan Salmón, we will develop a unified approach to among other things the compositional semantics of variable binding, reflexivity and propositional attitude reports. We will also discuss various accounts of synonymy, Mates' puzzle and solutions to the paradox of analysis (by Carnap, Church, Putnam, Richard, Salmón and others).
Simultaneously, we will develop an understanding of relevant ideas from theoretical computer science, including dependent type theory, monads, mutation and continuations. At some point, our historical-philosophical study will catch up with our study of computer science, at which point we will look at Jim Pryor's "relational" approach to the aforementioned issues, which draws heavily on computer science.
Finally, we will compare and contrast Pryor's approach with the one due to Church and Salmón. If there is time, we will also look at related work in linguistics by Barker, Shan and Charlow. Again, the goal will be to find the simplest and most unified approach to the various issues we discuss.

Contenido Temático			
Unidad	Temas	Horas	
		Teóricas	Prácticas
1	Logic	16	
2	Theoretical computer science	16	
3	Philosophy of language	16	
4	Linguistics	16	
	Total de horas:	64	
	Suma total de horas:		

Bibliografía y actividades:

- Hankin, C. (2004) *An Introduction to Lambda Calculi for Computer Scientists*.
- Burge, T. and Enderton, H. (ed.s) (2019), *The Collected Works of Alonzo Church*. MIT Press.
- Fine, K. (2007). *Semantic Relationism*. Oxford University Press.
- Geach, P. T. (1962), Reference and Generality, Cornell University Press.
- Pryor, J. (2017). De Jure Codesignation. *A Companion to the philosophy of language*. Blackwell.
- Russell, B. (1905). On Denoting. Mind
- Salmon, N. (1986). Reflexivity. Notre Dame Journal of Formal Logic, 27(3), 401–429.
- Salmon, N. (1992). Reflections on reflexivity. Linguistics and Philosophy, 15(1): 53–63.
- Salmon, N. (2006). A Theory of Bondage. Philosophical Issues, 16(1): 263-274.
- Salmon, N. (2012). Recurrence. Philosophical Studies, 159: 407-441.
- Salmon, N. (2015). Recurrence again. Philosophical Studies, 172 :445–457
- Soames, S. (1994). Attitudes and Anaphora. Philosophical Perspectives 8, 251-72.
- Barker, C and Shan C. (2014) *Continuations and Natural Language*. Oxford University Press.
- Shan C. (2002) Monads for natural language semantics.

Medios didácticas:		**Métodos de evaluación:**	
Exposición profesor(a)	(**X**)	Exámenes o trabajos parciales	(**X**)
Exposición alumnos	(**X**)	Examen o trabajo final escrito	(**X**)
Ejercicios dentro de clase	( )	Trabajos y tareas fuera del aula	( )
Ejercicios fuera del aula	( )	Exposición de alumnos	(**X**)
Lecturas obligatorias	(**X**)	Participación en clase	(**X**)
Trabajo de investigación	(**X**)	Asistencia	( )
Prácticas de campo	( )	Prácticas	( )
Otros: ———————	( )	Otros: ———————	( )

Nota: (en caso que exista alguna)

Evaluación y forma de trabajo

Imparte:
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Día y hora del curso o seminario (dos propuestas):
Lu y Mie 16-18 hrs.