

## ORGANIZATIONAL

Each of the 12 weekly sessions will be divided into 2 half-sessions.

There is one required reading for each half-session.

There are several recommended, not required, readings for each session, but it is not anticipated that any student will read all, or even most, of them: they differ in degree of closeness of connection to the required readings they accompany, and in the amount of technical or other background they presuppose on the part of the reader.

There are also papers of my own on the list, and these are, even more so than the recommended readings, completely optional: I will merely mention them in discussion where I think parts of one may be relevant enough that a student really interested in the half-session where they come up may want to have a look at them.

The works in question are listed separately on the syllabus reading list below.

N.B. Quine1948 (first item on the syllabus) is available at «[princeton.edu/~jburgess/Quine1948.pdf](http://princeton.edu/~jburgess/Quine1948.pdf)» and similarly for the others

Ideally, each half-session would consist of

- an exposition, preferably by a student presenter, of the argument of the main paper, with as much sympathy as the presenter can muster
- comments by the presenter identifying some topics that could use further discussion
- discussion of such topics and any others that come up as we proceed
- a brief account by me of what's in the optional papers, mine and others', if there has not already been such comment in the discussion

Pre-generals graduate students may fulfill two sorts of requirements through the course

- half the requirement to give presentations in two seminars by serving as presenter for two half-sessions, consecutive or not
- a unit requirement in epistemology by in addition writing two short papers (each about a quarter the length of an ordinary unit paper) identifying the main issues that came up in discussion, and the main points made; the two short papers may be combined into a longer one (about half the length of an ordinary unit paper) if the topics of the two half-sessions were so related as to make this useful or desirable

## READING LIST

### 13 SEP **Mathematical Ontology: The Generation of the Discussion**

10:00-11:15 [Organizational & Introductory: No Reading]

11:30-12:45 Quine1948

"On What There Is"

see also Church1959

"Ontological Commitment"

and see JB2015a

"What Are Mathematical Objects & Who Cares?"

### 20 SEP **Quine on Nominalism**

10:00-11:15 Goodman&Quine1947

"Steps toward a Constructive Nominalism"

see also Quine1946

"Nominalism"

11:30-12:45 Colyvan1998&2019

"Indispensability Arguments in the Philosophy of Mathematics"

see also Putnam2006

"Putnam on Modality, Models, Muddles"

### 27 SEP **Quine vs Carnap**

10:00-11:15 Carnap1950

"Empiricism, Semantics, & Ontology"

see also Eklund2015Thomasson

review of Thomasson *Ontology Made Easy*

11:30-12:45 Quine1951

"On Carnap's Views on Ontology"

and see JB2004a

"Mathematics & *Bleak House*"

JB2014a

"Quine's Philosophy of Logic & Mathematics"

### 04 OCT **Epistemological Arguments for Nominalism**

10:00-11:15 Benacerraf1973

"Mathematical Truth"

see also Jubien1977

"Ontology & Mathematical Truth"

Field1988

"Realism, Mathematics, & Modality"

Clarke-Doane2016

"What Is the Benacerraf Problem?"

11:30-12:45 Tait1986

"Truth & Proof"

and see JB1989

"Epistemology & Nominalism"

### 11 OCT **Geometric Nominalism**

10:00-11:15 Field1982

"Realism & Anti-Realism about Mathematics"

see also Resnik1985

"How Nominalist Is Hartry Field's Nominalism?"

11:30-12:45 Urquhart 1989

"The Logic of Physical Theory"

see also Shapiro1983

"Conservativeness & Incompleteness"

and see JB1991

"Synthetic Physics & Nominalist Realism"

JB1983

"Why I Am Not a Nominalist"

18 OCT           **Structuralism**  
10:00-11:15 Benacerraf1965  
11:30-12:45 Pettigrew2008  
see also       MacBride2018Linnebo  
and see       JB2009

"What Numbers Could Not Be"  
"Platonism & Aristotelianism about Mathematics"  
review of Linnebo *Philosophy of Mathematics*  
"Modest Structuralism"

25 OCT           **Modal Nominalism**  
10:00-11:15 Chihara1984  
see also       McLarty2004Chihara  
and see       JB2005Chihara  
11:30-12:45 Hellman2001  
see also       Putnam1967  
and see       JB2019a

"A Simple Type Theory without Platonic Domains"  
review of Chihara *A Structural Account of Mathematics*  
review of Chihara *A Structural Account of Mathematics*  
"Three Varieties of Mathematical Structuralism"  
"Mathematics without Foundations"  
"Putnam on Foundations: Models, Modals, Muddles"

#### FALL RECESS

08 NOV           **Neo-Fregeanism**  
10:00-11:15 Boolos1998  
  
and see       JB1984Wright  
11:30-12:45 Wright1989  
see also       Eklund2007  
              Dummett1957  
              Woods2014  
and see       JB2004b

*Logic, Logic, & Logic:*  
(1997a)       143-154       "Gottlob Frege & *The Foundations of Arithmetic*"  
review of Wright *Frege's Conception of Numbers as Objects*  
"Field & Fregean Platonism"  
"Bad Company & Neo-Fregean Philosophy"  
"Nominalism"  
"Logical Indefinites"  
"Quine, Analyticity, & Philosophy of Mathematics"

15 NOV           **Set Theory**  
10:00-11:15 Goedel1947  
see also       Boolos *ibid*  
and see       JB2014b  
11:30-10:45 Maddy2005  
see also       Maddy2017  
              Hamkins2011  
and see       JB2004c

"What Is Cantor's Continuum Problem?"  
(1997b)       120-132       "Must We Believe in Set Theory?"  
"Intuitions of Three Kinds in Gödel's Views on the Continuum"  
"Mathematical Existence"  
"Set-Theoretic Foundations"  
"The Set-Theoretic Multiverse"  
"Maddy on Mathematical Existence"

22 NOV      **Plural Logic, Mereology, Megethology**  
 10:00-11:15 Boolos *ibid*                      (1984)              54-72              "To Be Is to Be ... Some Values of Some Variables"  
 see also      Boolos *ibid*                      (1985)              73-87              "Nominalist Platonism"  
                   Varzi2003-2016                      "Mereology"  
 11:30-12:45 Lewis1993                      "Mathematics Is Megethology"  
 and see      JB2015b                      "Lewis on Set Theory"

THANKSGIVING RECESS

06 DEC      **Natural Language Ontology**  
 10:00-11:15 Moltmann2011                      "Reference to Numbers in Natural Language"  
 see also      Hofweber2005                      "Number Determiners, Numbers, & Arithmetic"  
 and see      JB2016                      "Reconciling Anti-Platonism & Anti-Nominalism in the Philosophy of Mathematics"  
 11:30-12:45 Yablo2001                      "Go Figure"  
 but see      Rosen&JB2005                      "Nominalism Reconsidered"  
 and see      JB2019b                      "Fictionalism as a Phase"

13 DEC      **Mathematical Ontology: The Degeneration of the Discussion**  
 10:00-11:15 Melia2005Azzouni                      review of Azzouni *Deflating Existential Consequence: A Case for Nominalism*  
 but see      JB2004Azzouni                      review of Azzouni *Deflating Existential Consequence: A Case for Nominalism*  
 11:30-12:45 Lewis1990                      "Noneism or Allism?"  
 and see      JB2005                      "Being Explained Away"