I. **Administrative** – 5 minutes

   A. Presentation assignments

   B. Talk this afternoon: David Frank, “Commensurability for Conservation Prioritization”, 338 Natural Resources, 3-4:30

   C. Questions about the reading essays?

   D. *General questions?*

II. **Final Thoughts on Truth-Conditional Semantics** – 10 minutes

   A. Truth conditions as truth theorems: The goal of the project

   B. Do truth conditions give us meanings?

      1. Soames’ general concern

      2. The Foster argument: p. 47

III. **Background #1: Modality and Its Importance to Philosophy** – 15 minutes

   A. Following Garson (http://plato.stanford.edu/entries/logic-modal/), we will take a *modal* to be “an expression (like ‘necessarily’ or ‘possibly’) that is used to qualify the truth of a judgement.”

      1. Thus, propositions can be true or false *in different ways.*

      2. Modals figure into sentences, rendering them non-truth-functional (i.e., non-extensional) – “It is possible that I left my light on in my office” vs. “It is possible that I am not self-identical.”

      3. Their influence on propositions constrain logical relationships that induce
various common inferential patterns across different fragments of language (e.g., language having to do with possibility/necessity, duty/obligation, past/present, belief/knowledge), which is one reason why ‘modal logic’ is often understood more broadly as comprising epistemic, deontic, and tense logics.

B. The thematic banner under which investigation into modals is organized is *modality*.

1. This is a topic of interest to philosophers and linguists alike.

2. Philosophers distinguish between *epistemic* modality and *metaphysical* modality. (See Soames, pp. 53-56.)

3. Modality can be seen as crucial to philosophy—“Modality is, of course, central to philosophy” (Soames, 63)—because (a) philosophy aims to develop theories of concepts that captures there possible application and not just their actual application, and (b) philosophy is interested in identifying nomological (i.e., lawlike) patterns associated with these concepts and so are interested in *necessity*.

   a. We use *possibility* and *necessity* all the time, and failure to understand it represents a failure to understand our subject matter

   b. It isn’t perhaps hyperbole to say that no topic is more important to understanding philosophical methodology and philosophical goals than modality.

### IV. Background #2: Extensions and Intensions — 15 minutes

A. Concepts introduced by Carnap and modified by logicians, philosophers, and linguists for use in formal semantic models (e.g., possible worlds semantics, Montague semantics, two-dimensional semantics)

B. See handout: [https://www.msu.edu/~orourk51/431-Phil/Phil/Handouts/Philosophical/431S13-ExtensionsIntensions.pdf](https://www.msu.edu/~orourk51/431-Phil/Phil/Handouts/Philosophical/431S13-ExtensionsIntensions.pdf)

### V. Possible Worlds and Modal Logic — 20 minutes

A. *Possible worlds*

   1. The idea can be traced back to Leibniz: there are *ways things might have*
been, and these can be understood as possible worlds.

a. One can think of them concretely (e.g., Lewis, Stalnaker), or one can think of them heuristically.

b. A good way to think about them for our purposes is as maximal consistent sets of propositions

c. Soames recommends thinking of them as “world-states”, or as “maximal world-representing properties” (52).

2. Kripke is given credit for harnessing the idea for formal purposes in his account of the semantics of modal logic.

a. They can be used to capture differences across modal sentences

b. We can model propositions as sets of worlds: a proposition P is the set of possible worlds in which P is true.

c. Using this idea and functions, we can generate compositional calculi for representing the semantics of natural language (e.g., Montague semantics)

B. Modal logic – See handout: https://www.msu.edu/~orourk51/431-Phil/Spring%202013/Handouts/Philosophical/431S13-SemanticsOfMPLI.pdf

VI. Extensional and Intensional Semantics – 10 minutes

A. Extensional Semantics

1. Extensional approaches to semantics model the meaning of a language (or a fragment) using extensions alone

2. Extensions

   a. These are what a linguistic item stands for, or designates, or refers to, or denotes

   b. Formally, they are typically represented as objects or sets

3. Extensional contexts

   a. These are linguistic contexts within which meaning turns only on
the extensions involved

b. The example of possibility

4. Two roles

   a. Descriptive: Use to provide the semantics for extensional contexts, and so fragments of a language that are extensional in this way

   b. Normative: An approach to NL semantics that treats NL as extensional, although this is problematic

B. Intensional semantics

1. Intensional approaches to semantics model the meaning of a language (or a fragment) using more than extensions—they acknowledge that with respect to the language that “extensions are not enough” (Fitting, SEP).

2. Intensions

   a. These are what a linguistic item means or connotes

   b. Formally, they are typically modeled as functions that assign extensions at possible worlds

3. Intensional contexts

   a. You need more than extensions to capture the semantic behavior here

   b. These are often marked by substitution failure (see Frege) or the suspension of existential commitments (Forbes, SEP)

VII. Metaphilosophical Considerations on Theoretical Strategy and the Nature of Analysis – Remaining time

A. Two strategies for building semantic theory: pp. 63-4

B. What is the relation between philosophical analysis and specification of meaning?