

Welcome to Logic and Critical Reasoning!

- In this class, you'll learn:
 - what makes an argument good
 - how to tell whether an argument has those features
 - how to see the structure of an argument and evaluate its weak/strong points
 - how to construct a good argument of your own
- This is important because it's good to argue (civilly) with other people, and to examine your own reasons for believing what you believe. It's a crucial part of intellectual honesty, and intellectual honesty is good.

The Plan

(The details of this might change, but we'll cover all these things at some point in the class.)

Logic (2 sessions)

When you evaluate arguments, one thing you need to figure out is whether the premises actually support the conclusion. This is often tricky, and it's hard to give a general definition of "support". So we'll start the course by looking at one kind of support that premises can give to a conclusion, where there's a clear criterion for whether they support it or not. If the premises *entail* the conclusion, then the argument is *logically valid*.

- Finding premises and conclusions: we'll look at arguments in english and figure out what the argument is supposed to convince us of (the conclusion) and which things are supposed to be reasons in favor of it (the premises).
- Definition of logical validity: *if* the premises are true, the conclusion *must* be true.
- Ways of testing for validity
 - Look for a counterexample
 - Use truth tables
- How to add premises to make an argument valid
- The notion of logical strength: how much do the premises entail, and is it too much?
 - If you want your argument to be good, you usually want the premises to be just strong enough to entail the conclusion. Otherwise, the premises might be false, but not in a way that makes the conclusion false, and you don't want someone to be able to object to the argument on those grounds.

Everyday Arguments (3 sessions)

If you're going to use the lessons of this course in your daily life (and you should!) you'll need to be able to deal with the kind of arguments you'll run into all the time. This takes lots of practice — it's not always clear whether someone is making an argument, or what they're saying if they are — so we'll look at lots of examples from op-eds, letters to the editor, blogs (maybe), and so on.

Interpreting What Someone Else Says (1 session)

- We'll start with non-arguments: descriptions, explanations, etc. This will let us deal with all the issues involved in criticizing arguments, except the parts having to do with the connection between the premises and conclusion.
- Dealing with ambiguity, and unclarity in general
 - Examples of ways something can be ambiguous
 - When you're trying to make it clear to yourself what someone else is saying, keep in mind what the context is, from the author's point of view. Put yourself in the author's frame of mind.
- Reading charitably
 - Why we do it: if you don't object to the best possible reading of the argument, you a) might not be objecting to the real argument, b) aren't giving the best possible response (if you objected to a better version of the argument, you'd have a better objection).

Evaluating an Argument (2 sessions)

- What's persuasive vs what *should* be persuasive
 - Some arguments sound plausible, and (especially if you want to believe the conclusion) you might fall for them even though the premises don't actually support the conclusion well enough, or they do but they're false, etc. So you can't rely on what *sounds* good.
 - Some common fallacies, and why they're fallacies
- How to find argument structure
- How to evaluate the strength of the connection between premises and conclusion, when you're not always looking for logical entailment. (Inductive arguments, etc.)
- How to find hidden premises
- Adding premises the author would find plausible
- Once you've got the best version(s) of the argument you can get, where are the strong and weak points?
- How to evaluate the truth of factual claims — is the argument sound?
 - When you construct your own arguments, keep in mind that people will be checking your premises. If you can help them by citing a reputable source, or using the version of your claim that's best supported by the facts, you'll make your argument stronger and more persuasive.

Argument Construction (2 sessions)

- One responding to an argument you find on your own
- One arguing for something you believe

For each one, you'll bring in a rough draft, trade it with someone else, and critically evaluate the other person's argument. Then you'll trade back and rework your own argument in a way that responds to the other person's comments.