PHIL 100 General Logic

THE WHIRL-WIND TOUR: WHAT YOU WILL BE STUDYING HERE

Logic – the study of good reasoning, or inference, and the rules that govern it
Critical thinking – the systematic evaluation or formulation of beliefs, or statements, by rational standards
1. not necessarily negative – just careful examination
2. Concerned with reasons for beliefs, in the sense of justification
   Not all causes of beliefs justify them
   unthinking acceptance of the beliefs of people around you
   prejudices, superstitions, and religious beliefs are often, though not always, adopted unreflectively this way
   emotion
   (example: we are more willing to accept what someone we like tells us than we are to accept the same thing if told by someone we don't like)
3. We have a right to our own opinions, BUT some beliefs are better than others
   a. better justified – better supported by evidence and reasoning
   b. so more likely to be reliable, more likely to be true
   c. so serve us better as guides to decisions and actions

SKILLS to be developed and refined here
1. recognizing whether a group of statements (a passage of text or bit of conversation) contains an argument
2. understanding arguments – identifying what components play what roles
3. evaluating how well arguments support their conclusions
4. constructing arguments that provide strong support for their conclusions

Initial focus on skills 1 and 2, Course Objectives 1-3

TERMINOLOGY, VOCABULARY for description & evaluation of arguments

STATEMENT claim, assertion,
the kind of thing that can be believed, can be T or F
expressed by declarative sentence

REASONS support for statements, the sort of thing that justifies believing them
ARGUMENT  a group of statements, one of which (the CONCLUSION) is to be supported by the others (PREMISES and SUBSIDIARY CONCLUSIONS)

CONCLUSION – the ultimate point to be supported or defended in the argument

PREMISES – starting points, not defended in this argument (though they may be defended elsewhere)

SUBSIDIARY CONCLUSIONS – defended within this argument, and also used within this argument to defend or support another claim

Sample argument:
1. Jack is taller than Marie.  premise
2. Marie is taller than Fred.  premise
3. So Jack is taller than Fred.  subsidiary conclusion, relying on 1 and 2
4. And Fred is taller than George.  premise
5. So George is shorter than Jack.  conclusion, based on 3 and 4

INFERENCE the process of reasoning to a conclusion (subsidiary or main conclusion) from one or more premises

SKILL #1: recognizing whether a group of statements contains an argument
Recognize that the bit of conversation or writing
a. asserts a claim,
   and b. offers at least one other claim to support the truth of its main claim

EXPLANATION versus ARGUMENT
Argument attempts to show (or convince someone) that the claim is true
Ex. 1: Rosa and Ana are in the same class because they want to be able to carpool.

Explanation attempts to show how the claim came to be true, or clarify why it is true - PRESUPPOSES (ASSUMES OR TAKES FOR GRANTED) that the claim is true
Ex. 2: In fact, those [cancer patients] who choose hospice over aggressive treatment [near the end of life] often live longer and with less discomfort because the ill effects of chemotherapy can hasten death …

Dr. Thomas J. Smith, oncologist and palliative care specialist at the Massey Cancer Center of Virginia Commonwealth University
http://www.nytimes.com/2008/08/19/health/19brod.html?ref=health (viewed 8/24/08)

SKILL #2: UNDERSTANDING ARGUMENTS
1. IDENTIFYING PREMISES
2. IDENTIFYING MAIN CONCLUSION
3. identifying subsidiary conclusions, distinguishing them from ultimate or main conclusion
4. recognizing how premises, subsidiary conclusion(s) & main conclusion are related
   a. which elements support which
   b. identify irrelevant premises that do no work toward support of conclusion
5. recognize appropriate standard of evaluation: inductive or deductive? (relates to skill #3)
Work on **SKILL #2** understanding arguments  
(also relevant to **skill # 4**, constructing & expressing arguments)

**UNDERSTANDING ARGUMENTS**

**RE 1:** premise indicators preceding the premise(s) (p. 15)
- since
- as
- for the reason that
- as indicated by the fact
- that
- inasmuch as
- the reason being that
- as shown by the fact that
- because
- given that
- due to the fact that
- seeing as how
- for
- seeing that
- on the grounds that
- being that

**RE 2 & 3:** conclusion indicators preceding the conclusion (p. 15)
- therefore
- in conclusion
- proves that
- for this reason we can see that
- thus
- accordingly
- demonstrates that
- on these grounds it's clear that
- so
- it follows that
- implies that
- we can infer that
- hence
- shows that
- indicates that
- it can be inferred that
- ergo
- consequently
- we can conclude that
- it must be the case that

**RE 1 - 3:** placement
a. premises often precede conclusion indicators listed above
b. conclusion often precedes premise indicators above, and must precede some of them

**RE 1-4:** Even without premise or conclusion indicator words, in some cases relationship between statements makes it plausible that one is the point others are there to establish: it is one for which others would provide reasonable evidence or support

**Example 1**  
Al is likely to be promoted. His boss is leaving. Al has worked in his unit longer than anyone else and consistently earns the best performance evaluations.

**Example 2**  
Sheila hasn't answered the phone or returned my call's all week. She has the whole week off from work. She's probably out of town.

**RE indicators, warning:** rules of thumb, not infallible guides

- because, since  
-sometimes used in EXPLANATION that is not offered as argument

- since  
-sometimes used to indicate TIME relationship  
Example 1: Alonzo has disliked the boss since he started this job.
Example 2: Paula and Elena have been friends since they were 5 years old.

- so  
-sometimes indicates purpose rather than conclusion  
Example 1: Renata copied the chapter she wanted to read so she could have it on the plane without carrying the whole book.
Example 2: Jorge put a password on the file so it would be harder for anyone else to read its contents.

- finally  
-sometimes just indicates ending rather than conclusion of an argument

- in conclusion  
-like 'finally'
Enthymeme: argument with an unstated premise or conclusion (re 1–3)

1. **Ustated premise** - usually either common knowledge and/or fills obvious gap in the argument
   a. Ana couldn’t have killed Ed. He was killed at 6:30, and she was at work till 6.
      [Unstated premise: It would take longer than a half an hour to get from where Ana works to where Ed was killed]
   b. Hal passed PHIL 200. So Hal has satisfied the Critical Reasoning requirement.
      [Unstated premise: Anyone who had passed PHIL 200 has satisfied the Critical Reasoning requirement]
   c. The aurora borealis can’t be seen from Ecuador. It’s only visible near the North Pole.
      [Unstated premise: No place in Ecuador is near the North Pole]

2. **Unstated conclusion**
   a. obvious inference to which listener is guided by the premises:
      Lena let her 14-year brother drive her car. Only a fool would do that.
      [Unstated conclusion: Lena is a fool]
   b. rhetorical questions
      i. Who would hire Sam? He has no interpersonal skills, he couldn’t think his way out of a paper bag, he can barely read, and he looks like he hasn’t taken a shower in a month.
      [Unstated conclusion: No one would hire Sam]
      iii. Is a man who is just discovering the Internet qualified to lead a restoration of America’s economic and educational infrastructures? Is the leader of a virtually all-white political party America’s best salesman and moral avatar in the age of globalization? Does a bellicose Vietnam veteran who rushed to hitch his star to the self-immolating overreaches of Ahmad Chalabi, Pervez Musharraf and Mikheil Saakashvili have the judgment to keep America safe?
      “Last Call for Change We Can Believe In,” Frank Rich, op-ed in *The New York Times*
      [Unstated conclusions: No to each question; McCain is not the best candidate]