Program __Bachelor of Arts, Concentration in Logic and Philosophy of Science__

Department __Philosophy__________

Number of students enrolled in the program in Fall, 2011 __12________________

Faculty member completing template __T. Pyne_____________ (Date 2-22-12)

Period of reference in the template: 2006-07 to present

1. Please describe your program’s learning-outcomes trajectory since 2006-07: Has there been a transformation of organizational culture regarding the establishment of learning outcomes and the capacity to assess progress toward their achievement? If so, during which academic year would you say the transformation became noticeable? What lies ahead; what is the next likely step in developing a learning-outcomes organizational culture within the program? [Please limit your response to 200 words or less]

No “transformation of organizational culture” because none was needed. Assessment plan and procedures in place since 2000 revealed the need for improvement in ‘clear argumentative writing’ and in ‘identification of the precise issue.’ By 2002 the Department had approved the “Philosophy Department Writing Guidelines” and the “Grading Standards for Philosophy Papers” precisely as a consequence of what was learned via assessment.

Since 2008 the Department has been clarifying the assessment goals and improving procedures. This resulted in a 2011 policy requiring three writing samples from each major: ‘Threshold,’ ‘Intermediate,’ and ‘Capstone.’ The samples, taken over three different stages in the student’s career as a major will give us diachronic data on how well our learning goals are being met. Since the first program assessment in 2000 we have been able to compare graduating seniors from year to year. With this new process we will be able to compare graduating seniors as a group with their ‘previous selves’ – what they were like (again as a group) when they first declared the major. The three-stage assessment will also give us a more fine-grained picture of how to revise and revise requirements, improve courses and course assignments to meet the goals.

2. Please list in prioritized order (or indicate no prioritization regarding) up to four desired learning outcomes (“takeaways” concerning such elements of curriculum as perspectives, specific content knowledge, skill sets, confidence levels) for students completing the program. For each stated outcome, please provide the reason that it was designated as desired by the faculty associated with the program.

The following outcomes are not prioritized, but mutually entailed. Progress in achieving one outcome presupposes progress in achieving the others.

a) Demonstrate understanding of major historical and contemporary philosophical developments; demonstrate mastery in reading and analyzing philosophical texts.
b) Capacity to state a position (including positions not one’s own) clearly, neutrally, plausibly, and effectively; the capacity to distinguish the precise issue from other similar-appearing issues.

c) Show development in the capacity to argue for a position, marshal support by synthesizing detailed information from relevant sources; demonstrate facility for devising original arguments and criticisms.

d) Demonstrated comprehension of central issues in the philosophy of science as well as those arising within the study of language, mind, and space and time.

3. For undergraduate programs only, in what ways are the set of desired learning outcomes described above aligned with the University's Baccalaureate Learning Goals? Please be as specific as possible.

Outcome (a) falls under Competence in the Disciplines, since it involves mastery of the competencies and values in a major field of study, philosophy. It also falls under Knowledge of Human Cultures, since the history of philosophy is a basic field in the humanities, engaged with ‘big questions, contemporary and enduring.’

Outcome (b) falls under Intellectual and Practical Skills: analysis and philosophical thinking, as well as written and oral communication.

Outcome (c) also falls under ‘Intellectual and Practical Skills, with particular emphasis on ‘critical’ and ‘creative’ thinking.

Outcome (d) falls under Competence in the Disciplines since it involved mastery of a particular sub-discipline within philosophy. It also falls under Knowledge of…the Physical and Natural World, through study in the sciences and a branch of mathematics, namely logic.

4. For each desired outcome indicated in item 2 above, please:

a) Describe the method(s) by which its ongoing pursuit is monitored and measured.

The assessment takes the form of an essay review. Submitted essays are evaluated by the department’s Assessment Committee for performance in all four of the outcomes.

b) Include a description of the sample of students (e.g., random sample of transfer students declaring the major; graduating seniors) from whom data were/will be collected and the frequency and schedule with which the data in question were/will be collected.

The assessment consists of essays submitted at three different periods during a major’s career. For the first, every student must submit a paper from a class taken within a semester of the student’s declaring the major.
The second is from a class in our core required courses: PHIL 112, PHIL 152, PHIL 180, PHIL 181; this review may be a sampling.

The third is an essay written for PHIL 189, the senior seminar.

For Outcome (d) the review samples those submissions in each classification which are papers on topics in ethics.

c) Describe and append a sample (or samples) of the “instrument” (e.g., survey or test), “artifact” (e.g., writing sample and evaluative protocol, performance review sheet), or other device used to assess the status of the learning outcomes desired by the program.

**Sample Argumentative essay (4-5 pages)**

In classical physics the physical property of ‘length’ is an intrinsic property of objects: a change in an object’s length is a change in the object. If an object is measured to be a different length from a given perspective it is because that perspective somehow provides the observer imperfect access to the property.

In relativistic physics, the same object will measure length \( l \) in one reference frame and measure length \( l' \) in another.

Since in relativistic physics there is no absolute reference frame, there is no frame of which it could be said that, in *that* frame, the object measures its ‘real’ length. The conclusion seems to follow that length is not an intrinsic property of an object after all, but frame-relative. It is a relational property, depending on how the measurer is situated relative to the object measured.

As for ‘length,’ so also for ‘distance,’ ‘weight,’ ‘before,’ ‘simultaneous,’ ‘past,’ ‘future’ and other terms.

Does the term ‘length’ in classical physics refer to the same property as the term ‘length’ in relativity? Argue one side or the other.

Your paper should consider the following points:

a) If yes, this seems to conflict with the usual assumption that terms used so differently are equivocal. That suggest that we have become clearer on the meaning of a term rather than learning more about what length is. But surely science is supposed to give us knowledge about the world, not our language.

b) If no, then in what sense is classical physics ‘false’?

d) Explain how the program faculty analyzed and evaluated (will analyze and evaluate) the data to reach conclusions about each desired student learning outcome.

Evaluation of the essay submissions have been made using the “[Grading Standards for Philosophy Papers](#)”. Under the revised procedures approved in 2011 evaluation are made using the new [Program Value Rubric](#).
Sample rubric applying to the General Major: ‘Analysis and Philosophical Thinking’

<table>
<thead>
<tr>
<th>Learning Goal</th>
<th>Proficient</th>
<th>Competent</th>
<th>Threshold, or Not Adequate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program – Specific Knowledge</td>
<td>Demonstrates sophisticated comprehension of central issues in the philosophy of science; shows detailed grasp of the design and significance of scientific studies and experiments; demonstrates proficiency with proof in first order propositional and predicate logic; demonstrates thorough understanding of the core concepts of probability and decision under uncertainty.</td>
<td>Demonstrates good comprehension of central issues in the philosophy of science and those arising within the study of language, mind, and space and time; shows basic grasp of the design and significance of scientific studies and experiments; demonstrates ability to do simple to medium difficulty proofs in first-order propositional and predicate logic, but may struggle with complex problems; demonstrates basic understanding of the core concepts of probability.</td>
<td>Demonstrates preliminary and general comprehension of basic issues in the philosophy of science and those arising within the study of language, mind, and space and time. Shows acceptable grasp of the design and significance of scientific studies and experiments; ability to do proofs limited to simple problems; may be unable to solve problems in probability above an introductory level.</td>
</tr>
</tbody>
</table>

(If the requested data and/or analysis are not yet available for any of the learning outcomes, please explain why and describe the plan by which these will occur. Please limit your response to 500 words or less.)

The data for previous essay reviews, conducted under the Grading Standards document are available and have been used to make revisions and improvements in the program. The new essay reviews will be conducted under the Program Value Rubric.

5. Regarding each outcome and method discussed in items 2 and 4 above, please provide examples of how findings from the learning outcomes process have been utilized to address decisions to revise or maintain elements of the curriculum (including decisions to alter the program’s desired outcomes). If such decision-making has not yet occurred, please describe the plan by which it will occur.

[Please limit your response to 200 words or less per item]

a) Regarding Outcome (a): “understanding of major historical and contemporary philosophical developments, essays revealed satisfactory mastery of contemporary philosophical developments. However, student needed a better grounding in the history of philosophy. In the latest curriculum
revisions, our older lower-division history cycle PHIL 25 (Ancient) and PHIL 27 (Early Modern), which were also in C-1 of GE were combined into PHIL 26, and two new upper-division courses (PHIL 127, PHIL 128) instituted as requirements for all majors.

b) Regarding Outcome (b): A regular item in the biannual faculty meeting on teaching methods, held during the work week before classes begin, has been how to design class paper topics that both test and improve students’ ability to state the precise issue they are treating and not stray from it in the course of their argument. Several faculty have started to include assignments requiring students to present an argument for a position they oppose. Some faculty now require in any class essay a final section detailing the best objection to the argument of the essay, with an answer to the objection.

c) Regarding Outcome (d): the department has always insisted on the value of analytic argumentative papers. We would continue to refine our writing assignments even if our assessment findings showed exceptional performance in every one of our students, which it doesn’t.

d) Assessment revealed that Logic and Philosophy of Science students had an inadequate understanding of probability, leading to the creation of PHIL 61 (Inductive Logic) as a requirement for this concentration. PHIL 61 also serves as an alternative to Symbolic Logic in the other programs.

6. Has the program systematically sought data from alumni to measure the longer-term effects of accomplishment of the program’s learning outcomes? If so, please describe the approach to this information-gathering and the ways in which the information will be applied to the program’s curriculum. If such activity has not yet occurred, please describe the plan by which it will occur.  
[Please limit your response to 300 words or less]

We have not sought data from alumni.

7. Does the program pursue learning outcomes identified by an accrediting or other professional discipline-related organization as important? Does the set of outcomes pursued by your program exceed those identified as important by your accrediting or other professional discipline-related organization?  
[Please limit your response to 300 words or less]

There is no special accreditation for philosophy programs.

8. Finally, what additional information would you like to share with the Senate Committee on Instructional Program Priorities regarding the program’s desired learning outcomes and assessment of their accomplishment?  
[Please limit your response to 200 words or less]
Much of the Philosophy Department’s recent revision of its programs, including the concentration in Logic and Philosophy of Science, was motivated and guided by the results of past assessments. Where students needed reinforcement in a given goal, assignments for doing so were incorporated in classes.

The new assessment procedures will give us more detailed information about how to revise course assignments so that the transition of a major through the three stages of assessment will be smooth and natural.