

[NB: This report was produced primarily for internal departmental use. The findings are extremely preliminary, and we do not intend for them to be taken as authoritative.]

Who Majors in Philosophy And Why (Or Why Not?)

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I. Background

Professional philosophers have for some time been concerned with the low numbers of women, racial minorities, and other historically underrepresented groups. A number of empirical studies have now been performed, which suggest that the biggest leak in the pipeline occurs at the undergraduate level, between taking introductory courses and majoring in the discipline. Various hypotheses—including classroom climate, pre-existing schemas about philosophy, lack of role models, and course content—are currently being explored, with mixed results. (See Miller, Baron, & Dougherty’s 2014 literature survey for a full review.) Our analysis contributes to this body of research by examining students’ explicit self-reports of their reasons for and against choosing to major in philosophy.

II. Methods

An in-class paper survey, developed by the Director of Undergraduate Studies, was distributed to undergraduate philosophy courses in Winter 2013. The courses included introductory surveys, topical introductions, core major requirements, and logic and critical thinking (but not upper-level seminars, which include both undergraduate and graduate students). The aim of the survey was to collect information that would be useful to the department for increasing undergraduate enrollment. 477 surveys were collected. (A complete copy of the survey questions is attached to the end of this report). 444 of these were deemed usable, as the others contained omissions in some or all of the primary fields analyzed (e.g. gender, reasons for/against).

The reasons provided for NOT majoring in philosophy were:

- “I find other subjects more interesting.” (AgainstSubject)
- “I like the teachers in other departments better.” (AgainstTeachers)
- “I worry that a philosophy major will not help me achieve my post-graduate goals.” (AgainstWorry)
- “It is harder for me to do well in philosophy classes.” (AgainstHard)

The reasons provided FOR majoring in philosophy were:

- “I like studying the subject.” (ForSubject)
- “I like the accessibility of teachers in the department.” (ForTeachers)
- “I like the opportunity to enroll in a section taught by a professor.”
- “It seems like a good way to acquire the skills I will need once I graduate.” (ForSkills)
- “My good friends are/were philosophy majors.”
- “Some of my best teachers have been philosophers.”
- “The requirements are easier to satisfy than the requirements of many other concentrations.”

Open-ended responses were also allowed, but we have not yet coded and analyzed them.

We analyzed the following factors for significant correlations with their reported likelihood (not likely, somewhat likely, very likely) of taking another philosophy, and with the reported reasons for and against majoring in philosophy.

Demographics

- gender (148 women, 296 men)
- transfer status (47 transfer students) – a very rough proxy for socioeconomic status

Experience with philosophy

- whether they had previous knowledge of any one of the following facts:
 - “Philosophy majors score higher than any other majors on the Verbal and Analytic GREs.”
 - “Philosophy majors score higher than all other non-STEM (science, technology, engineering, mathematics) majors on the Math GRE.
 - “By mid-career, the median income of philosophy majors is higher than that of business majors.”
- preference for more lecture or more discussion

Type of philosophy coursework

- Non-introductory course
- Small introductory and outreach courses (150s and 160s)
 - sections of 25-50 students, often topical: Philosophy of Art, Philosophy of Human Nature, etc
- Graduate Student-led Introduction (202)
- Large Faculty-led Introductions (e.g. 232, 160)
- Honors Introduction to Philosophy (297)
 - small, faculty-led seminars

We then analyzed the data in SPSS, using a variety of statistical methods as described below.

III. Results

Students reported their preferences for a number of potential program policies.

- 57% of students who responded preferred 3 hrs lecture/1 hr discussion over 2 hrs lecture/2 hrs discussion. 41% preferred the opposite, while less than 2% said they were indifferent or that it depended on the subject matter or instructor.
- 76% of students who responded were indifferent to whether philosophy courses were 3 or 4 credits. 16% preferred 3 credits, while 8% preferred 4 credits.
- 99% of students surveyed reported that they had previously attended a philosophy study break, while 1% had. 20% reported that they would be interested in attending a future study break, 74% reported that they would not, and 6% were unfamiliar with the concept.

Of those who said they would (and a few who said they would not be interested), students made suggestions including free food (by far the most popular suggestion), attendance from GSIs and faculty, speakers, and help with studying.

Next, we examined the data for significant correlations between gender and the reported reasons for and against continuing in philosophy. In both cases, we looked only at the subjects who had given at least one reason, and then used a t-test to compare the means between male and female. Of the possible reasons, many of them had far too small incidence rates to be useful, so we analyzed all the 4 reasons against but only the top 3 reasons for, reflecting the fact that more students chose not to continue in philosophy and so provided reasons against. No student who answered both reasons was included – this was classified as a failure to understand the question. Figures 1a and 1b show the descriptive statistics for the reasons for and against, respectively; a more graphic representation can be found in the histograms in figures 3a-d. Note that of the 444 surveys in the 7 reasons considered, 124 provided reasons for and 288 provided reasons against.

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
ForSubject	1.0	89	.910	.2876	.0305
	.0	34	.794	.4104	.0704
ForTeachers	1.0	89	.404	.4936	.0523
	.0	34	.353	.4851	.0832
ForSkills	1.0	89	.62	.489	.052
	.0	34	.74	.448	.077

Figure 1a: Descriptive statistics in the 'For' category, excluding non-responses

In all of the figures, gender '1.0' is male and '.0' is female.

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
AgainstSubject	1.0	186	.73	.447	.033
	.0	102	.89	.312	.031
AgainstTeachers	1.0	186	.06	.237	.017
	.0	102	.05	.217	.021
AgainstWorry	1.0	186	.56	.497	.036
	.0	102	.50	.502	.050
AgainstHard	1.0	186	.12	.324	.024
	.0	102	.27	.448	.044

Figure 1b: Descriptive statistics in the 'Against' category, excluding non-responses

We performed t-tests for equality of means on each of these categories. The “Reasons For” category (Fig. 2a) showed no significant results, though the nearest to significance ($p=.08$) was found for the reason “I like studying the subject”, where male students were more likely to report this as a reason. Because this relates to the results for the “Reasons Against,” we’ll come back to it later. However, in this and other tests performed, the “Reasons For” category yielded no significant correlations, neither with gender nor transfer status.

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
ForSubject	Equal variances assumed	.080	.1160	.0657
	Equal variances not assumed	.137	.1160	.0767
ForTeachers	Equal variances assumed	.604	.0516	.0990
	Equal variances not assumed	.602	.0516	.0983
ForSkills	Equal variances assumed	.226	-.117	.096
	Equal variances not assumed	.210	-.117	.093

Figure 2a: T-tests in the 'For' category by gender

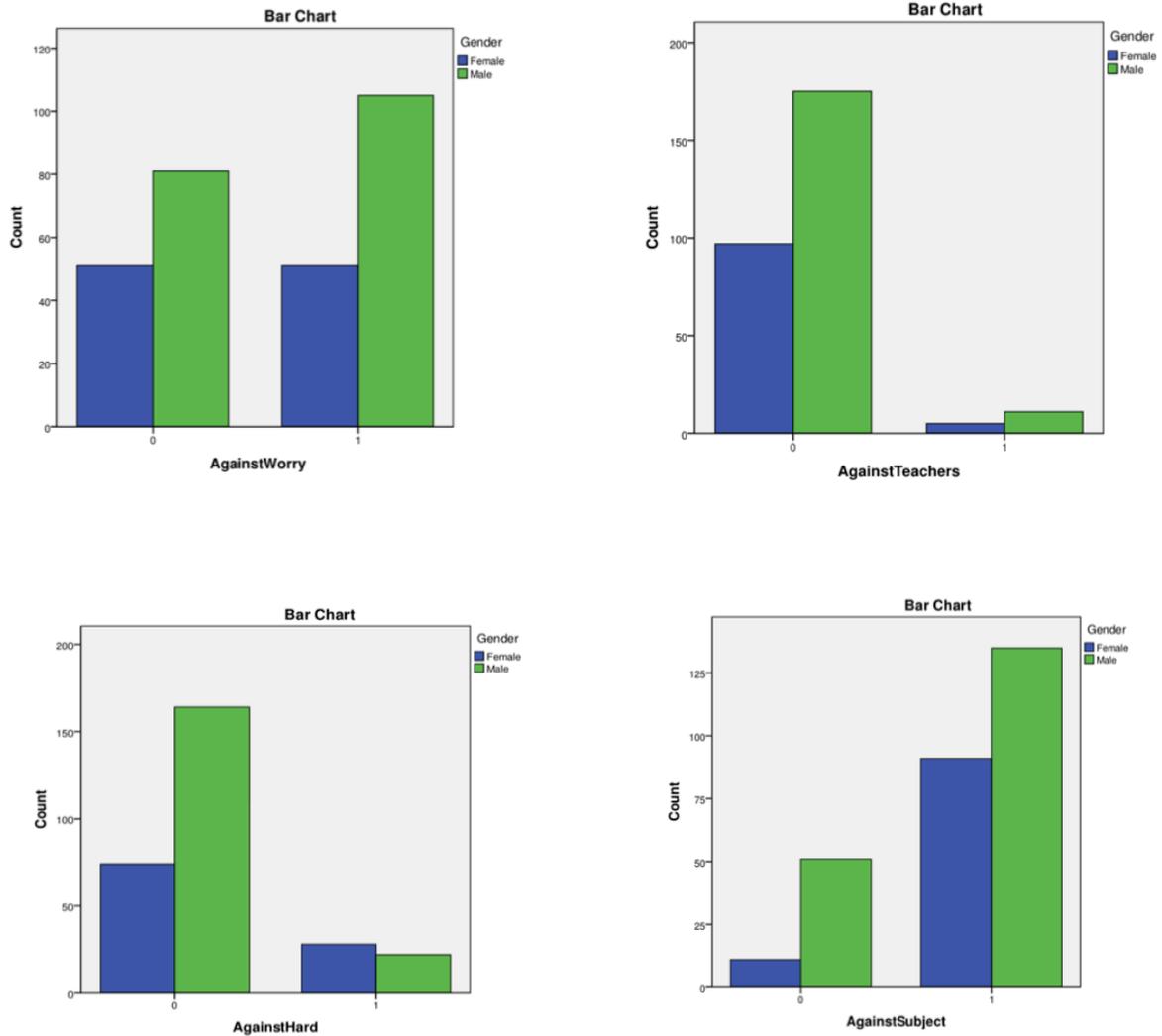
However, the “Reasons Against” t-test showed more interesting results (Fig. 2b). Here we found two highly significant correlations with gender ($p = .001$ in both cases). The first was that female students are more likely to report that they decided not to continue with philosophy due to feeling that “I was not able to do as well I wished in this subject.” and “I found another subject I liked better”, coded as AgainstHard and AgainstSubject respectively. There was no gender difference when it came to being dissatisfied with the effect of a philosophy concentration on future goals or with the quality of the teachers.

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
AgainstSubject	Equal variances assumed	.001	-.166	.050
	Equal variances not assumed	.000	-.166	.045
AgainstTeachers	Equal variances assumed	.721	.010	.028
	Equal variances not assumed	.714	.010	.028
AgainstWorry	Equal variances assumed	.295	.065	.061
	Equal variances not assumed	.297	.065	.062
AgainstHard	Equal variances assumed	.001	-.156	.046
	Equal variances not assumed	.002	-.156	.050

Figure 2b: T-tests in the 'Against' category by gender

This result is illustrated in the histograms in Fig 3a-d, which show the differences between responses by gender from Fig. 2b. Figure 3c is to our eyes the most visually striking.



Figures 3a-d: Histograms of Against data

This data analysis was very preliminary, and we are hesitant to draw strong conclusions. For instance, the correlation between gender and the 'AgainstHard' option might support any of the following explanations. Female students might (erroneously) view their performance as subpar, and hence might be more likely to switch from philosophy into majors with higher average grades such as the humanities. (Other studies have suggested that female student are more likely to leave a discipline when they fail to receive A's, while male students are unaffected. For example, see Rampell's (2014) summary article in the *Washington Post*.) Female students might be more influenced by stereotype threat, and come in believing or come to believe, based on situational threats, that philosophy is not for *people like them*. Male students might be socialized to avoid admitting weaknesses such as finding a subject difficult. The first of these theories could

be substantiated by analyzing where these students end up after leaving philosophy, which we hope to pursue through the cohort data. The other options seem more difficult to pin down.

Finally, we checked to see whether there were any significant correlations between the type of course students were enrolled in and the reasons they reported for not majoring in philosophy. This yielded a handful of potentially interesting results – all of the following were assessed according to a t-test at a significance level of $p < .05$. For instance, in non-introductory courses which presumably contain more students who are interested in or are already majoring in philosophy, students were—just as one would predict—less likely to report that they found other subjects more interesting, but they were *more* likely to report that they were worried that the philosophy major would not help them to achieve their post-graduate goals. Students were also slightly more likely to report these worries in graduate student-led introductions. They were less likely to report these worries in the small introductory courses, large faculty-led introductions, and logic courses. Students were more likely to report that they found other subjects more interesting in small introductory courses and large faculty-led introductions. And they were less likely to report difficulty performing well in large faculty-led introductions, but more likely to report such difficulty in logic courses. These results seem to suggest a number of reasonably plausible conclusions: that students feel more comfortable in classes with more experienced faculty instructors, that many students struggle with logic, that different things might lead to worries about the usefulness of philosophy for career prospects (e.g. type of instructor, topical vs. general) and that there is not a significant difference between student levels of interest in topical introductions by graduate students as compared to large faculty-led introductions.

IV. Further Research

There are a number of potential directions for further research. First, the open-ended responses could be coded and analyzed, particularly the questions concerning what courses students would like to see added to the curricula. (A non-quantitative survey of the data suggests that, in addition requesting more of the standard offerings like logic, history, and philosophy of science, students also requested more introductory classes, cross-listed classes, professional and applied topics relating to law, business, and economics, comparative philosophy, and topics relevant to current events and pop culture.) Students' self-reported career goals could also be analyzed to see whether there is any correlation with reasons for or against majoring in philosophy. Second, a newer version of the survey could include:

- Likert scale or other quantified measure
- Randomized question order
- Further questions regarding:
 - Race, disability, and other demographic factors
 - Quality of the philosophy student community*
 - Classroom climate, especially regarding students' experience of difficulty with coursework

Finally, it would be useful to see whether our results can be corroborated with other sources of data. For example, the philosophy department has been conducting yearly exit surveys of

philosophy majors (*a number of which mentioned the lack of a robust philosophy student community as an area to improve on). To this end, we have requested data on a cohort of first-year students enrolled in Fall 2012 to track their pattern of coursework and majoring decisions. We have also requested registrar data for the courses in which students took the survey, to determine whether women's perception of philosophy's difficulty was reflected by any gender discrepancy in final grades. We hope that pursuing these future directions of research will help to strengthen these preliminary findings.

See also: **Appendix A: Additional analysis (December 2015)**
 Appendix B: Copy of survey

References

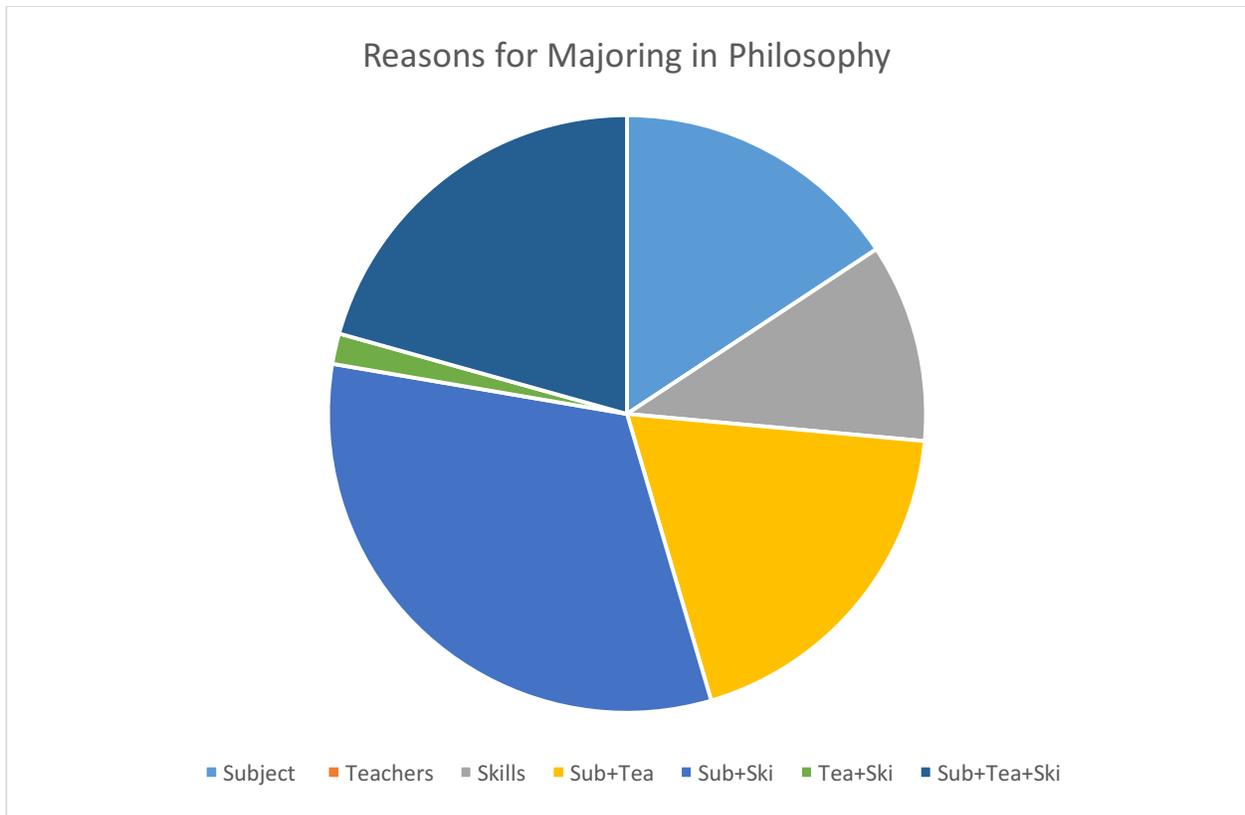
Kristie Miller, Samuel Baron, and Tom Dougherty. "Female under-representation among philosophy majors: A map of the hypotheses and a survey of the evidence." (unpublished manuscript). Available at:

<https://dl.dropboxusercontent.com/u/1994865/Female%20Underrepresentation%20Hypotheses%20and%20Evidence.pdf>

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Appendix A: Additional analysis (December 2015)

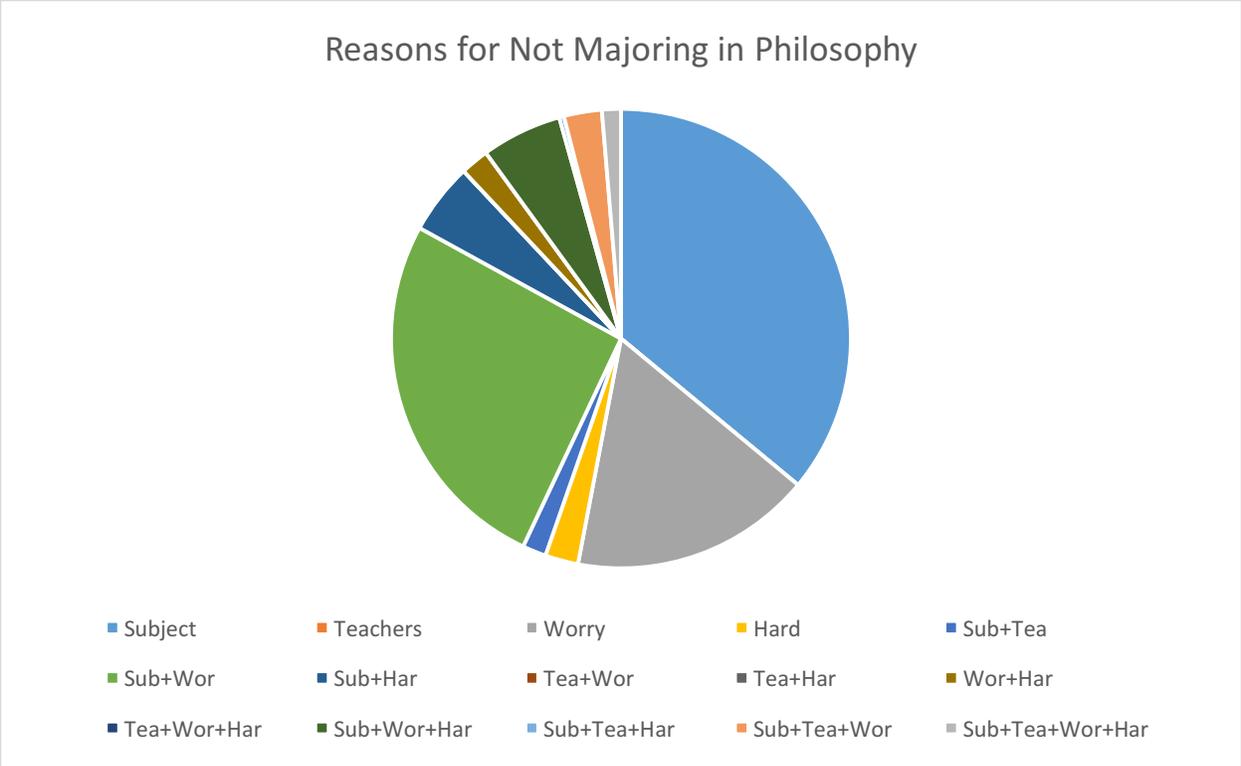
Breakdown of Reasons For and Against Majoring in Philosophy



n=121

- 16% majored out of pure interest in the subject
- 11% majored purely for the skills
- 32% majored out of interest and skills
- 19% majored out of interest in the subject and the teaching
- 21% majored out of interest, skills, and teaching

A small but not insignificant portion of students (16%) majored in philosophy purely out of interest in the subject, and a smaller portion (11%) did so purely for the skills. The largest group (32%) majored in philosophy due to their interest in in the subject along with their belief that it would help them acquire skills needed for post-graduate goals. Another 19% did so out of their interest in subject along with the accessibility of the faculty in the department, and 21% did so for all three reasons. As we might have expected, then, students are more or less similarly responsive to the subject matter and skill sets developed in the philosophy major, though teaching matters as well.



n=300

As one would expect, a large proportion of students (36%) who did not major in philosophy did so simply because they lacked interest in the subject. However, a sizeable portion, nearly half as large as that (17%) gave their only reason for not majoring in philosophy as the worry that it wouldn't help them achieve their goals. Overall, a full 55% of students expressed this worry. Only 2% indicated that they did not major in philosophy because it was hard (although another 14% mentioned it along with other reasons).

This suggests that efforts to explain and publicize the utility of the philosophy major for various post-graduate goals is worth further investigation. One further question that might be examined in this or future data is what sorts of goals were being pursued by students who worried that philosophy would not help to achieve them.

Coding of Open-Ended Responses

The following are the most common responses (along with the absolute number of students) given by students in response to the open-ended survey question: “Are there any changes to the philosophy course offerings that would make you more likely to take additional philosophy courses? (Feel free to include topics you would be especially interested in studying.”

1. Non-Western philosophy (e.g. Indian, Islamic) **9**
2. Relevance to concrete, real-world issues (including current events, popular culture, etc.) **8**
2. Logic **8**
3. Religion/theology **7**

- 4. History of philosophy **6**
- 5. Philosophy and law **5**
- 5. Science and technology (e.g. AI) **5**
- 5. Aesthetics **5**
- 6. General introductions **4**
- 6. Environmental/animal ethics **4**
- 6. Economics/business **4**
- 6. Political theory **4**
- 6. Ethics **4**
- 6. Philosophy of science **4**
- 6. Political economy/Marxism **4**
- 6. Continental **4**

Other responses (given by 3 or fewer students) included: more cross-listed courses, philosophy of sport, philosophy of mind, ontology, women's studies/diversity, philosophy of math, and social theory.

Appendix B

Questions for students currently enrolled in philosophy classes at the U of M

When you came to the University of Michigan, which concentration(s) did you think you would choose?

Is this (are these) still the subject(s) in which you are most likely to concentrate? Yes No

If you changed your mind, why? (Check all that apply.)

- I was not able to do as well as I wished in this subject.
- I found another subject I liked better.
- I was not able to have as much contact with professors as I want.
- My future goals changed.
- Another reason: _____

Which concentration(s) did you choose instead? _____

If you have chosen to concentrate or minor in philosophy, please explain why. (Check all that apply, but only those that really did play a role in your decision.)

- I like studying the subject.
- I like the accessibility of teachers in the department.
- I like the opportunity to enroll in a discussion section taught by a professor.
- It seems like a good way to acquire the skills I will need once I graduate.
- My good friends are/were philosophy majors.
- Some of my best teachers have been philosophers.
- The requirements are easier to satisfy than the requirements of many other concentrations.
- Another reason: _____

If you have chosen **not** to concentrate or minor in philosophy, please explain why. (Check all that apply, but only those that really did play a role in your decision.)

- I find other subjects more interesting.
- I like the teachers in other departments better.
- I worry that a philosophy major will not help me achieve my post-graduate goals.
- It is harder for me to do well in philosophy classes.
- Another reason: _____

If you are **not concentrating** in philosophy and have electives remaining, how likely is it that you will take another philosophy class?

- Very likely Somewhat likely Not very likely

Please indicate the philosophy course(s) in which you are currently enrolled:

Have you taken any other philosophy courses? Yes No

If so, which courses did you take, and when? (E.g., ancient philosophy (388), sophomore)

If you have a choice between two 4-credit courses that look equally interesting, which would you prefer? (select one):

- Two 1-hour lectures per week and two hours of discussion
- Two 1.5-hour lectures per week and one hour of discussion

If you have taken more than one class in philosophy (including this one), please mention anything you especially liked about these classes?

If you have taken more than one class in philosophy (including this one), please mention anything you especially did *not* like about these classes?

Are there any changes to the philosophy course offerings that would make you more likely to take additional philosophy courses? (Feel free to include topics you would be especially interested in studying.)

I would be inclined to take a philosophy class for 3 credits 4 credits doesn't matter

What do you hope to be doing three years after you graduate from the University of Michigan?

- Graduate school in _____
- Professional school: _____
- Business
- Teaching
- Government-related work
- Other: _____
- I don't know

Did you attend the philosophy study break in the fall of 2012? Yes No

Would you be interested in attending a study break in the future? Yes No

If yes, please indicate anything that would make such an event especially fun and/or useful for you.

When did you first begin taking classes at the University of Michigan? (Please give the season and the year)

Are you a transfer student? Yes No

Please indicate the philosophy course(s) in which you are presently enrolled

(Optional) Please indicate your gender. Female Male

Which of these did you know?

- Philosophy majors score higher than any other majors on the Verbal and Analytic GREs.
- Philosophy majors score higher than all other non-STEM (science, technology, engineering, mathematics) majors on the Math GRE.
- By mid-career, the median income of philosophy majors is higher than that of business majors.