

Humanities Education in Community Colleges: A Pilot Study

A Summary of Findings
Prepared by the Humanities Indicators

With an Appendix of Tables and Summary of Methodology prepared by:
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Study conducted with support from:



Any views, findings, conclusions, or recommendations expressed in this report do not necessarily represent those of the National Endowment for the Humanities.

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Introduction

Focus

The humanities are a large and growing presence in community colleges, as documented by the American Academy of Arts and Sciences' [Humanities Indicators](#) (HI), which monitors trends in [humanities degrees awarded](#) by these institutions and in the number of [humanities faculty](#). In an effort to more fully capture the scale and character of humanities education at these institutions, the HI (with funding from the [National Endowment for the Humanities](#)) surveyed the nation's community colleges on three key topics:

- 1) The number and share of students taking humanities courses;
- 2) The number and share of faculty teaching such courses;
- 3) The representation among humanities coursetakers of "dually enrolled" students, that is, students who earn college credit in the humanities while still in high school.

Background & Development

In the original conception of the HI, the American Academy did not envision collecting new data, planning instead to draw exclusively on *existing* high-quality data sources. As the HI developed in the early 2000s, however, project leaders confronted a lack of national data on key higher education topics. Working with the heads of scholarly societies in the field, project leaders sought to develop a survey to address these knowledge gaps, but they quickly ran up against a critical structural difference between two- and four-year institutions: while humanities education at four-year colleges and universities is typically organized into discipline-focused departments that could serve as the subjects of research, this is not the case at most community colleges.¹ Given that difficulty, the American Academy chose to focus its first forays into survey research on humanities departments at four-year institutions (in [2008](#) and again in [2013](#)).

Given that the nation's almost 1,000 public community colleges enroll approximately a third of the nation's undergraduates,² and serve a disproportionate share of non-traditional, low-

¹ The issue of identifying respondents at two-year institutions presented a challenge for a 1999 study by the Coalition on the Academic Workforce, which conducted a survey of departments at both two- and four-year institutions. The response rate for two-year humanities programs was a fraction of that for four-year colleges and universities, which presented a substantial problem for comparative analysis. Robert B. Townsend, *Who Is Teaching in US College Classrooms? A Coalition on the Academic Workforce Study of Undergraduate Faculty* (Washington, DC: American Historical Association, 2000), <https://www.historians.org/about-aha-and-membership/aha-history-and-archives/historical-archives/who-is-teaching-in-us-college-classrooms> (accessed 12/19/2018).

² In the text and tables that follow, institutions described as either "community colleges" or "two-year colleges" refer to public institutions identified as "Associates" colleges in the [The Carnegie Classification of Institutions of Higher Education](#), according to the US Department of Education's [Integrated](#)

income, part-time students, the Indicators staff recognized the need to include this sector in future studies. Meanwhile, the Academy continued to work with the [Community College Humanities Association](#) to develop a survey of the community college sector. After a 2012 meeting with leaders in this sector, as well as conversation with staff members at the [American Association of Community Colleges](#), the HI in 2014 conducted an exploratory survey of 25 presidents of community colleges. The results of this study were encouraging (demonstrating considerable interest among these institutions' leaders in knowing more about the state of the humanities at community colleges), but they also revealed two challenges. One was that differences in terminology and institutional structure between two-year and four-year institutions made it difficult to ask questions that would provide comparability between a study of community colleges and the surveys of four-year institutions already conducted by the HI. Additionally, some respondents noted that the HI's [conceptualization of the humanities](#), particularly its exclusion of the fine and performing arts from the field, could be counterintuitive for community college administrators and might affect their willingness or ability to respond to the survey.

A [meeting](#) with community college leaders and researchers in December 2015 led to the HI's commitment to developing a national survey tailored to the community college sector. Staff members drafted a survey instrument and conducted cognitive interviews with institutional researchers at a variety of colleges to assess the feasibility of questions on a wide range of topics. It became clear that questions of considerable interest to the field, such as those about the demographics of faculty and students, and also faculty employment status,³ were not likely to yield reliable estimates, due to the fact that those data were often contained in databases maintained by an administrative unit other than the institutional research office, such as the human resources department. A survey requiring a hand-off between units was likely to result in either high levels of nonresponse, or in poor-quality data (as institutional research supplied guesses when a hand-off proved difficult). The HI thus decided to limit the focus of the survey to the numbers of students and faculty involved in humanities education.

Methodology

With the particulars of the survey instrument reviewed and approved, HI staff assembled a comprehensive list of community college presidents to serve as the initial point of contact. The

[Postsecondary Education Data System](#) for the 2014–15 academic year. See Attachment A in the Appendix for specifics.

³ Faculty in two-year colleges are more likely to be employed in a part-time or adjunct capacity than their counterparts at four-year institutions. A 2003 federal survey of faculty found that two-thirds of the faculty and instructional staff in two-year colleges were employed part-time, as compared to less than half of the faculty and instructional staff across the higher education sector. See National Center for Education Statistics, *Digest of Education Statistics, 2016*, Table 315.60 (Full-time and part-time faculty and instructional staff in degree-granting postsecondary institutions, by race/ethnicity, sex, and selected characteristics: Fall 2003), online at https://nces.ed.gov/programs/digest/d16/tables/dt16_315.60.asp.

survey was sent by the HI's data contractor, the Statistical Research Center at the American Institute of Physics (SRC), to the presidents of 966 community colleges in the spring of 2017, seeking information for the Fall 2015 term (to ensure complete and accurate information was available). These colleges constituted every public, nontribal institution in the continental United States categorized by [The Carnegie Classification of Institutions of Higher Education](#) as an "Associate's College."

SRC conducted extensive follow-up with surveyed institutions to ensure an adequate rate of response. Twenty-nine percent of surveyed institutions responded. Missing data were estimated using multiple imputation. SRC was thus able to generate estimates of humanities students and faculty for the entire community college sector, and to classify institutions by size, region, and programmatic focus. As they are derived not from a census of community colleges but from data provided by a subset of institutions (the 29% that responded to the survey) combined with imputed data for nonrespondents, the findings reported here are *estimates* (upper- and lower-bound) of the true quantities.⁴ For a more detailed description of the study's methodology, see Attachments A–D in the Appendix.

All references to courses are to *credit-bearing* courses. All references to students or "coursetakers" are to those enrolled in at least one such course. Faculty estimates exclude instructional staff who teach only continuing education courses, as well as those who work in agricultural extension or clinical services.

⁴ Estimates are of the upper and lower bounds of a 95% confidence interval. See Attachment C for details.

Students Taking Humanities Courses at Community Colleges

One of the key goals of the study was to ascertain how many students in community colleges are touched by the humanities. To determine that, the survey asked for an unduplicated head count of students taking courses in four humanities disciplines (English, history, languages other than English, and philosophy), a count of students taking other humanities courses (either in another discipline or a general humanities course), as well as an unduplicated count of students taking a course in any humanities discipline. Schools were asked to supply unduplicated counts to allow for the possibility that some students take more than one humanities course in a given term (and thereby avoid inflated student counts).

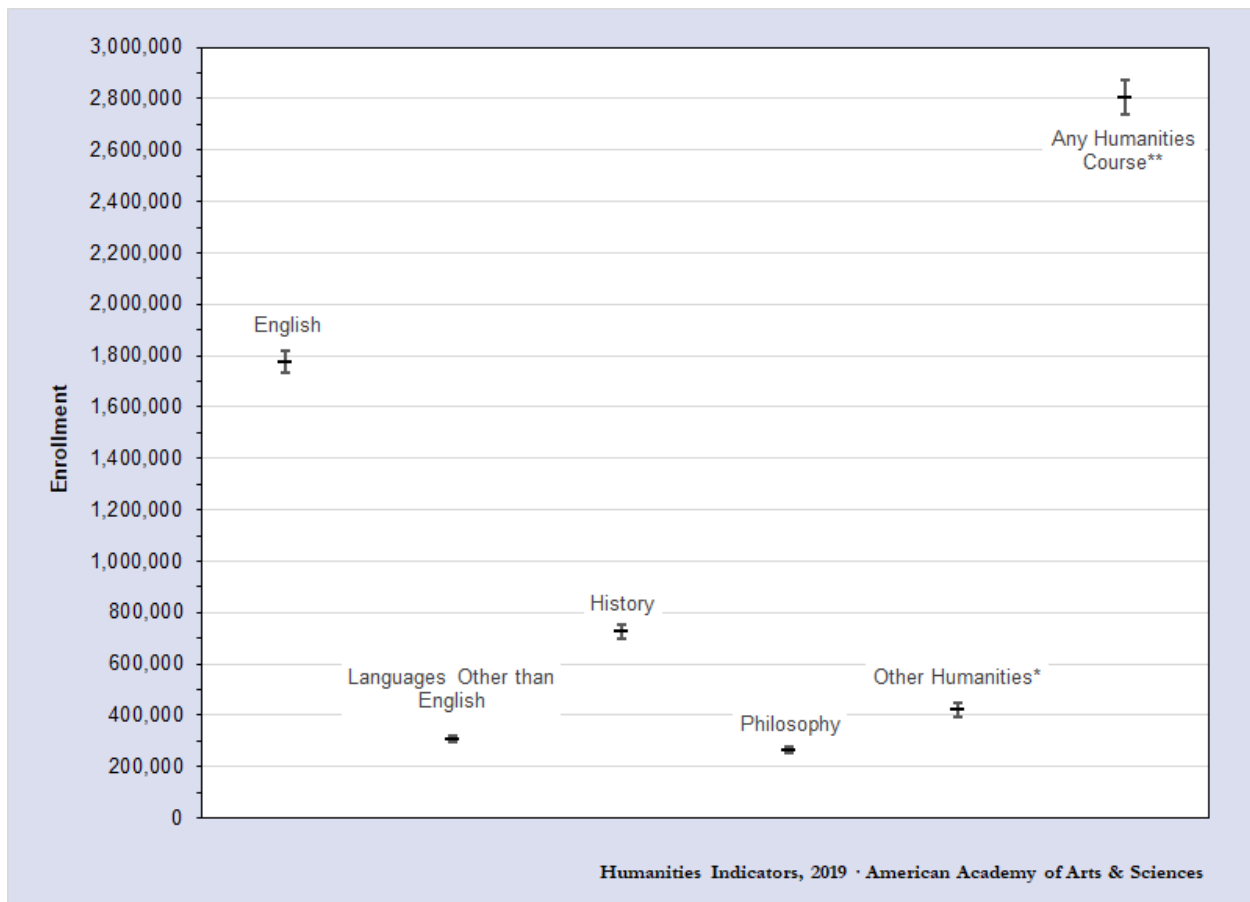
Key findings:

- Approximately 2.8 million students took a humanities course at a community college in the fall of 2015 (**Figure 1**).
- Over 1.7 million students took at least one course in English, and approximately 700,000 students took a history course in fall 2015. Courses in languages other than English (LOTE) drew approximately 300,000 students, while somewhere between 255,000 and 275,000 community college students took a philosophy course. Additionally, between 400,000 and 450,000 students took a course in another humanities discipline or a survey course in the humanities.
- Approximately 95% of community colleges offered a course or courses in English in fall 2015, and approximately 90% of community colleges offered a course in philosophy (**Figure 2**). History courses were offered at approximately 75% of community colleges, while almost two-thirds of community colleges offered a LOTE course.⁵ Slightly more than two-thirds of institutions offered either a general course in the humanities or a course in a humanities discipline not discussed above.
- In fall 2015, approximately 40% of all community college students took at least one humanities course (**Figure 3**). A quarter of students enrolled at community colleges were taking an English course, while students enrolled in history courses accounted for slightly more than 10% of all students. Students taking LOTE courses constituted about 4% of enrollments at two-year colleges, as was true for students taking philosophy courses. Students enrolled in other humanities courses represented approximately 6% of community college students.
- High school students accounted for approximately 10% of humanities coursetakers at community colleges, but the share varied widely by discipline (**Figure 4**). High school

⁵ The estimates for history and LOTE suggest a decline in the shares of institutions offering courses in history and LOTE since the 1990s, as a 1998 survey estimated that each subject was taught at 96% of the nation's community colleges. Florence B. Brawer, "Liberal Arts," *New Directions for Community Colleges: Trends in Community College Curriculum*, no. 108 (Winter 1999): 20, Table 2.2.

students constituted more than 14% of the students enrolled in English, history, and LOTE courses. Among students enrolled in philosophy and other humanities courses, however, less than 8% were high school students.

Figure 1: Community College Students Enrolled in Humanities Courses, by Discipline, Fall 2015



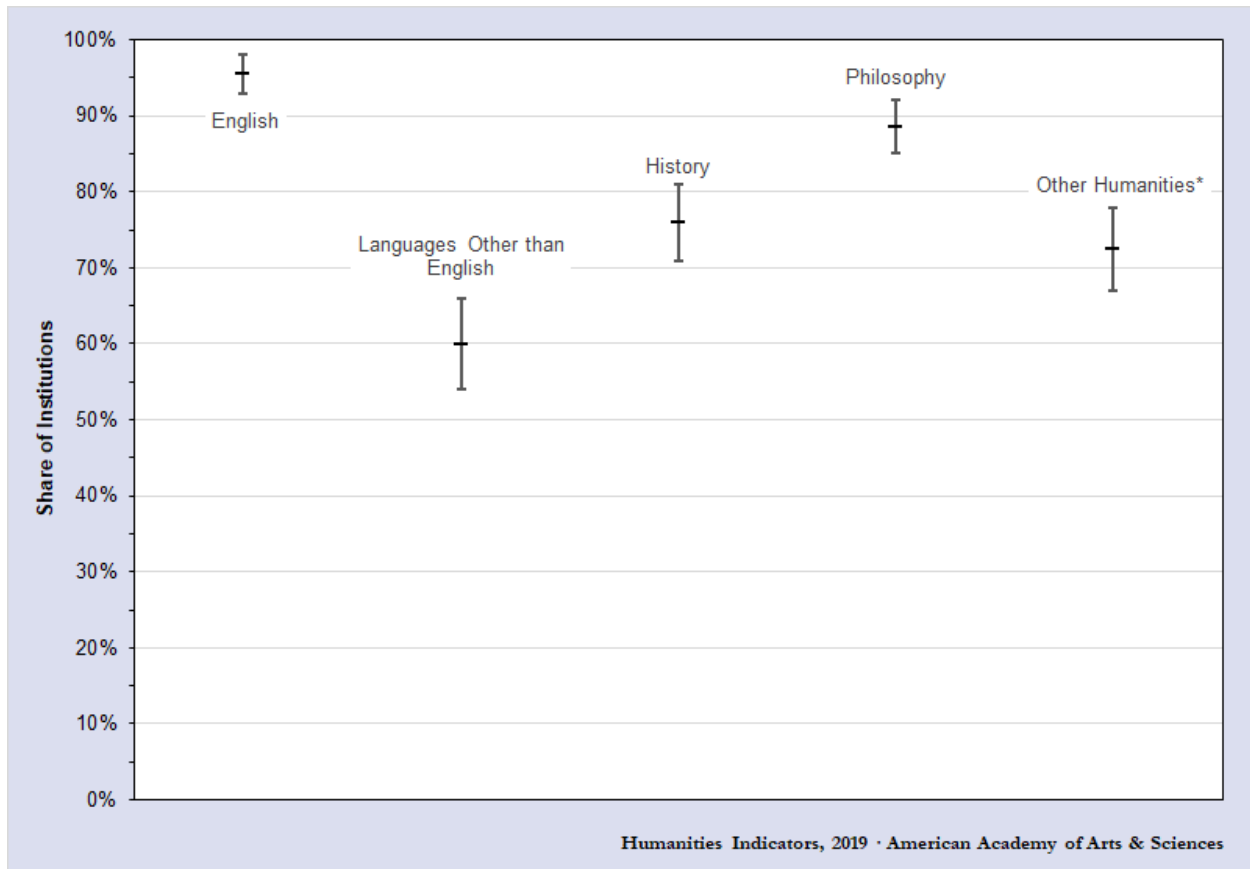
The middle bar depicts the estimated enrollment, and the upper and lower bars depict the range of uncertainty.

* Includes: 1) survey courses entitled “Humanities”; and 2) courses coded in colleges’ information systems as humanities but not counted in the other disciplinary categories.

** The estimated value for “Any Humanities Course” is unduplicated and thus less than the sum of the values for the individual disciplines.

For the values underlying this figure, see Appendix, table 6.

Figure 2: Share of Community Colleges Offering at Least One Humanities Course, by Discipline, Fall 2015

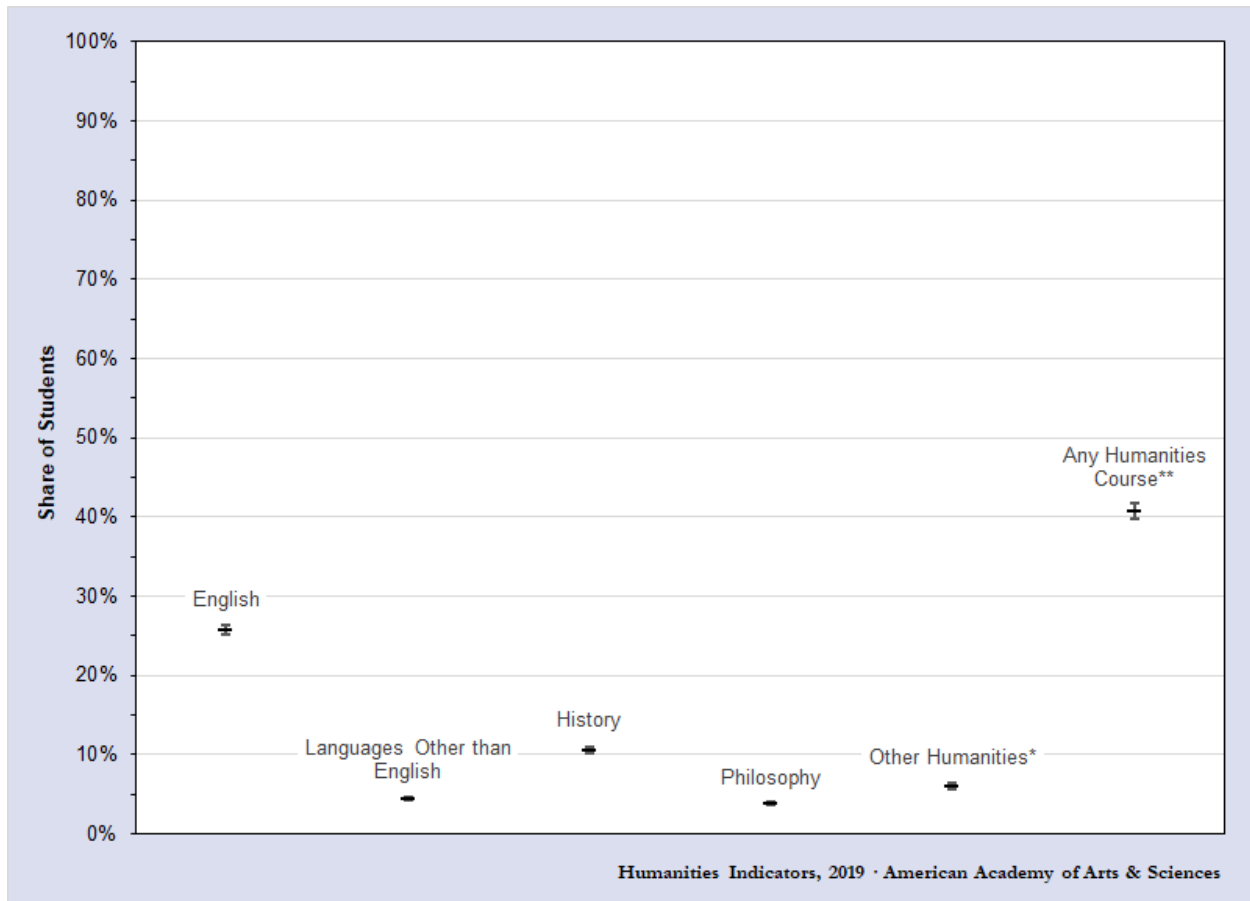


The middle bar depicts the estimated proportion, and the upper and lower bars depict the range of uncertainty.

* Includes: 1) survey courses entitled “Humanities”; and 2) courses coded in colleges’ information systems as humanities but not counted in the other disciplinary categories.

For the values underlying this figure, see Appendix, tables E1, FL1, H1, P1, and OH1.

Figure 3: Humanities Coursetakers as a Share of All Students Enrolled in Community Colleges, by Discipline, Fall 2015



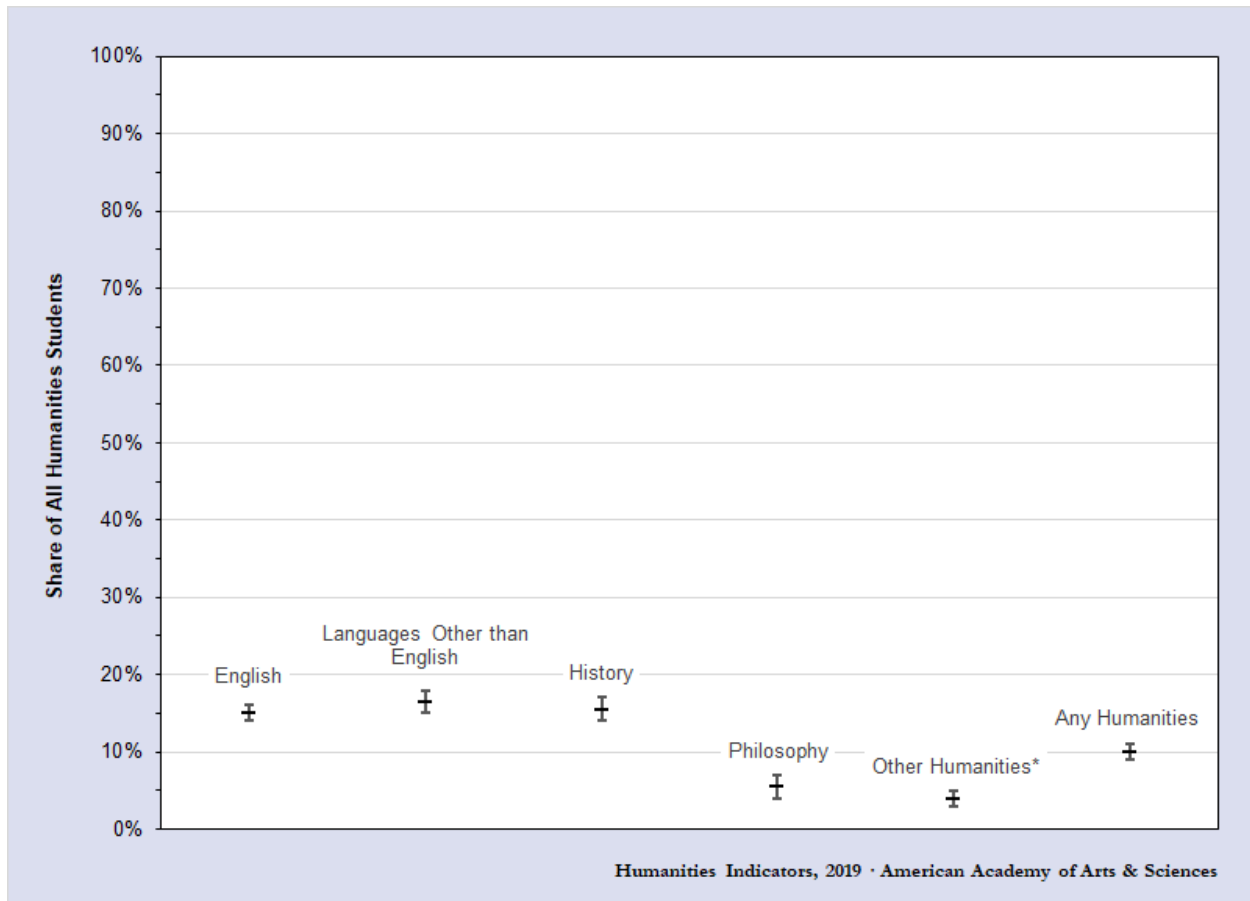
The middle bar depicts the estimated proportion, and the upper and lower bars depict the range of uncertainty.

* Includes: 1) survey courses entitled “Humanities”; and 2) courses coded in colleges’ information systems as humanities but not counted in the other disciplinary categories.

** The estimated value for “Any Humanities Course” is unduplicated and thus less than the sum of the values for the individual disciplines.

For the values underlying this figure, see Appendix, tables E1, FL1, H1, P1, and OH1.

Figure 4: Dually Enrolled High School Students as a Share of Humanities Course takers in Selected Disciplines, Fall 2015



The middle bar depicts the estimated proportion, and the upper and lower bars depict the range of uncertainty.

* Includes: 1) survey courses entitled “Humanities”; and 2) courses coded in colleges’ information systems as humanities but not counted in the other disciplinary categories.

For the values underlying this figure, see Appendix, tables 10, E5, FL5, H5, P5, and OH5.

Faculty Teaching Humanities Courses at Community Colleges

Another goal of the study was to determine how many faculty teach the humanities at community colleges. The survey could not provide details about the demographics and employment status of faculty (for reasons discussed above under “Background & Development”), but it does supply their number for the humanities field as a whole and in four of the largest disciplines. As with students, we requested that colleges supply unduplicated counts.

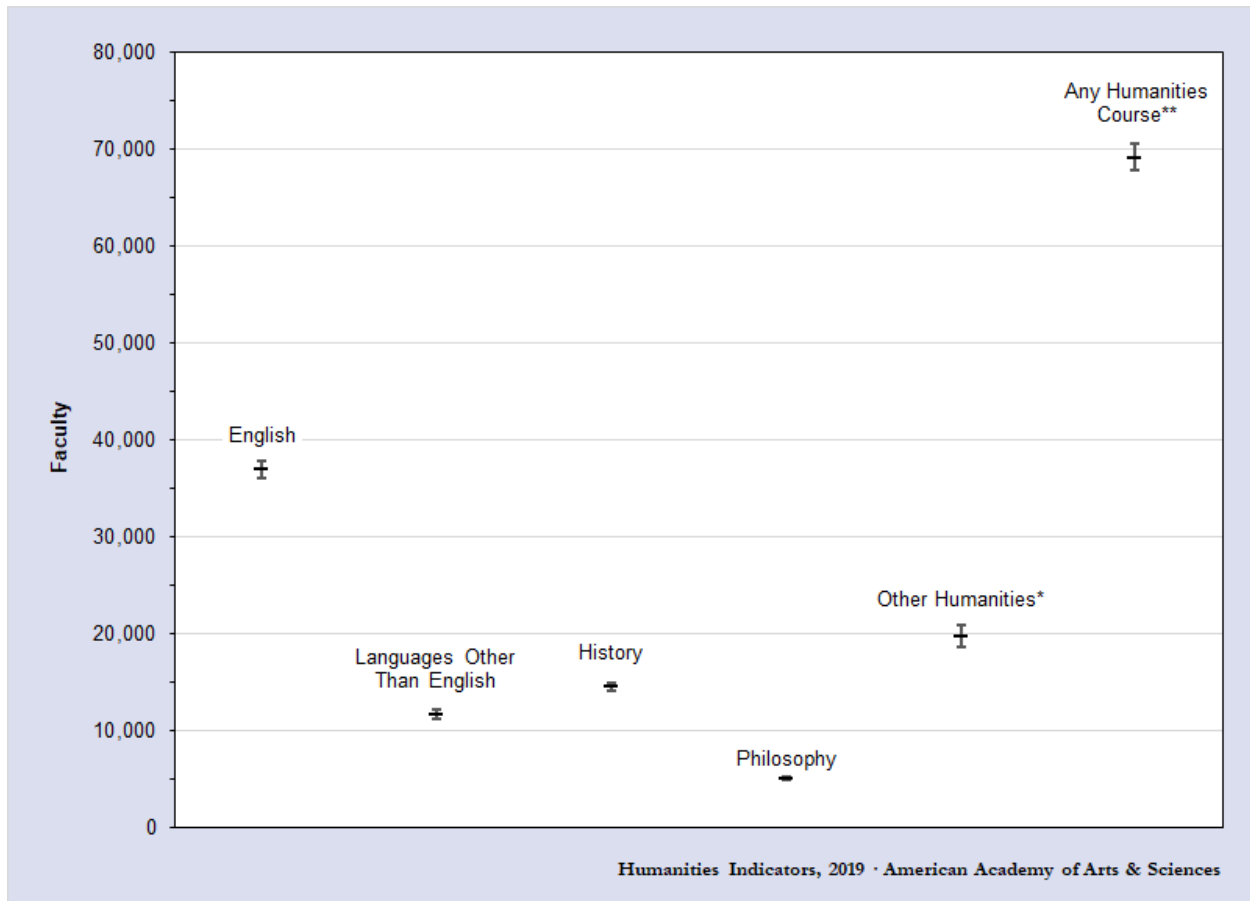
Key findings:

- Approximately 70,000 faculty taught at least one college-level humanities course for credit at community colleges in the fall of 2015 (**Figure 5**).
- More than half of the faculty teaching humanities courses in community colleges (approximately 37,000) taught English courses.⁶ About 14,200 to 14,900—or approximately 21% of faculty teaching humanities courses—taught history. Over 11,000 faculty taught LOTE courses, and approximately 5,000 taught courses in philosophy. In the vicinity of 20,000 humanities faculty, somewhat less than a third, taught general humanities courses or courses in another humanities discipline. The estimate for all faculty teaching humanities courses is less than the sum of the number of faculty teaching in each discipline, which indicates that some humanities faculty teach courses in more than one humanities discipline.
- Faculty teaching humanities courses represented approximately 20% of all community college faculty (**Figure 6**). Faculty teaching English accounted for about 10% of the total faculty population. Faculty percentages for each of the other disciplines examined here ranged from approximately 1% to 4%. Between 5% and 6% of all faculty taught general humanities survey courses or courses in unspecified humanities disciplines.
- The student-faculty ratio for courses in the humanities was 40:1, as compared to 20:1 overall at community colleges (when courses in vocational and nonhumanities subjects are included; **Figure 7**). Philosophy appeared to have the highest student-faculty ratio among the humanities disciplines examined here, with approximately 50 students for

⁶ Readers may note that the estimated number of faculty teaching at two-year colleges in each humanities discipline reported here is substantially higher than that reported [elsewhere by the HJ](#), using data from the Bureau of Labor Statistics’ Occupational Employment Statistics program (OES). Due to substantial differences between the OES methodology and that of this study, it is difficult to know what exactly is producing the discrepancy, although one factor may be that this study focuses on *courses*, whereas OES focuses on *jobs*. For the purposes of this study, anyone who teaches at least one humanities course is treated as humanities faculty. For OES, a person working at a college or university is classified as postsecondary faculty only if the bulk of his or her responsibilities are instructional. Thus, a college administrator, for example, who teaches an English course, would be included among humanities faculty for the present study but included among “Education Administrators, Postsecondary” by OES.

each faculty member. The lowest ratio among the humanities disciplines, approximately 26 students per faculty member, was found in LOTE.

Figure 5: Community College Faculty Teaching Humanities Courses, by Discipline, Fall 2015



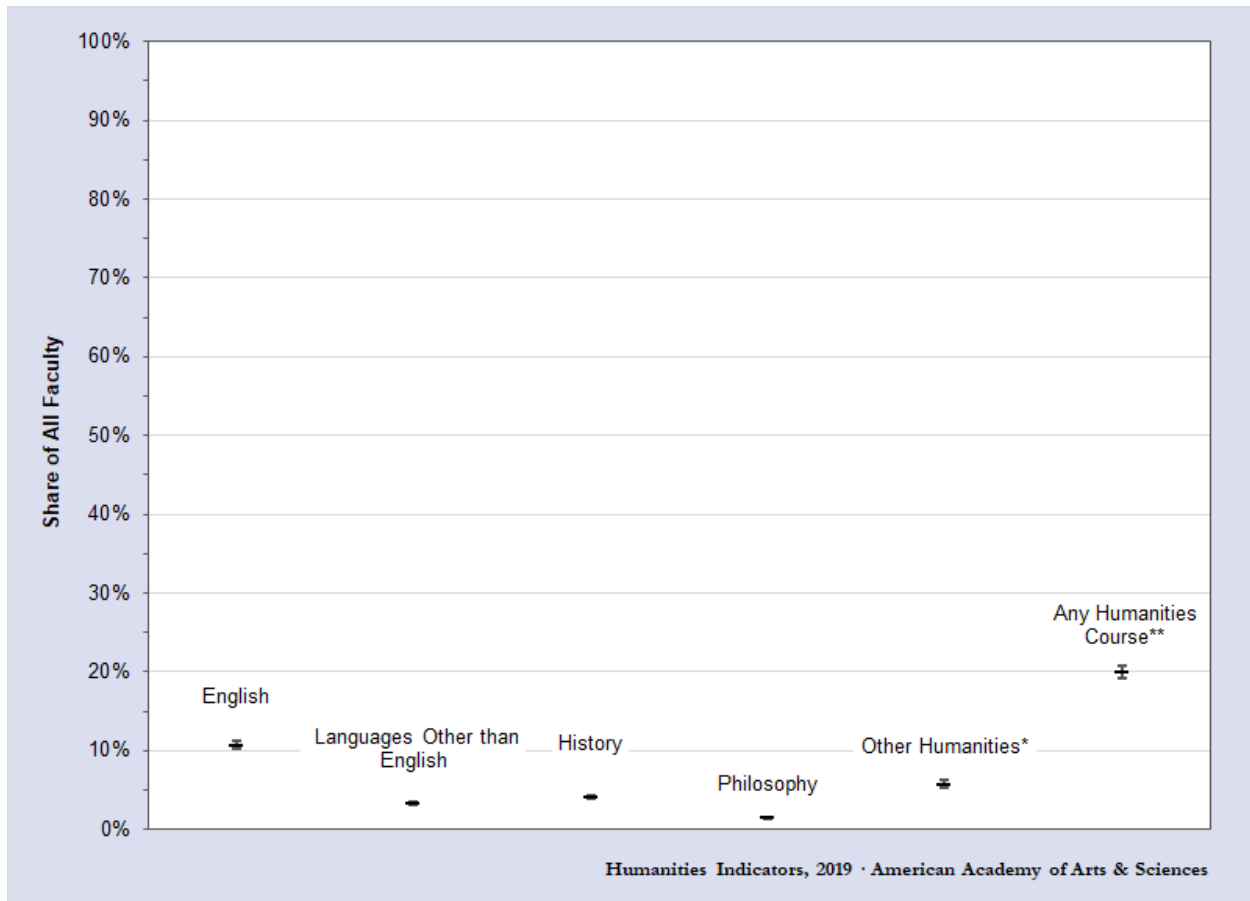
The middle bar depicts the estimated count, and the upper and lower bars depict the range of uncertainty.

* Includes: 1) survey courses entitled “Humanities”; and 2) courses coded in colleges’ information systems as humanities but not counted in the other disciplinary categories.

** The estimated value for “Any Humanities Course” is unduplicated and thus less than the sum of the values for the individual disciplines.

For the values underlying this figure, see Appendix, table 14.

Figure 6: Share of Community College Faculty Teaching Humanities Courses, by Discipline, Fall 2015



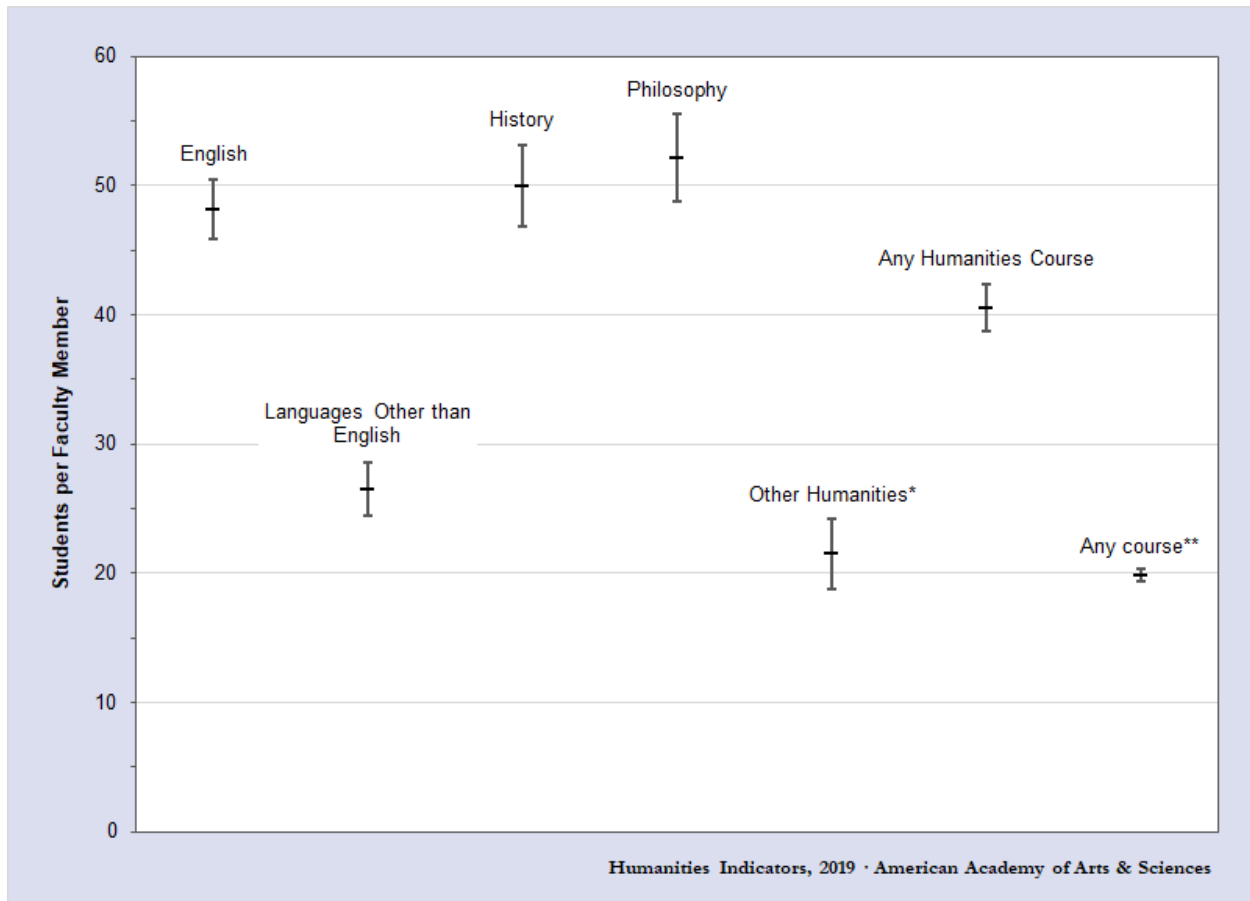
The middle bar depicts the estimated proportion, and the upper and lower bars depict the range of uncertainty.

* Includes: 1) survey courses entitled “Humanities”; and 2) courses coded in colleges’ information systems as humanities but not counted in the other disciplinary categories.

** The estimated value for “Any Humanities Course” is unduplicated and thus less than the sum of the values for the individual disciplines.

For the values underlying this figure, see Appendix, tables E1, FL1, H1, P1, OH1, and S1.

Figure 7: Ratio of Community College Students to Faculty for Courses in Selected Humanities Disciplines, Fall 2015



The middle bar depicts the estimated count, and the upper and lower bars depict the range of uncertainty.

* Includes: 1) survey courses entitled “Humanities”; and 2) courses coded in colleges’ information systems as humanities but not counted in the other disciplinary categories.

** Including humanities courses, vocational courses, and courses in nonhumanities fields.

For the values underlying this figure, see Appendix, tables 1, E1, FL1, H1, P1, OH1, and S2.

Regional & Institutional Differences in Humanities Education at Community Colleges

The community college sector is diverse, with institutions across the nation varying greatly in size and educational focus. Some focus primarily on vocational training, and others offer a mix of programs but with a substantial focus on preparing students to transfer to four-year colleges and universities. This study makes comparisons among institutions along several dimensions. The most striking findings—which relate to regional differences and contrasts among institutions with different institutional foci—are presented below. (For comparisons by institution size, please see the Appendix.)

This section’s findings include two types of comparisons. The first way in which regions⁷ and institution types⁸ are compared is in terms of the share of community colleges offering humanities courses (**Figures 8 and 10**). To determine whether differences exist among regions and institution types (or within them, as far as the share offering different types of humanities courses), one may examine whether the estimated ranges overlap. If there is no overlap, there is evidence to suggest that there is a difference between them. For details as to how to compare groups in this way, see the “Interpreting the Results” section of the Appendix.

Also examined in this section is the way in which the nation’s humanities coursetakers are distributed across regions and institution types (**Figure 9 and Figure 11**). In this case, the

⁷ The tabulation uses the US Census Bureau definition for four regions, which includes the following states in each region: **Northeast** (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont); **South** (Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia); **Midwest** (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin); **West** (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming). See Attachment B for details.

⁸ To classify the institutions by program focus, the analysis and tables use the [Basic Carnegie Classification of Institutions of Higher Education](#), gathering the Carnegie subcategories into the following clusters: **Career & Technical** (Associate’s Colleges: High Career & Technical-High Nontraditional, High Career & Technical-High Traditional, High Career & Technical-Mixed Traditional/Nontraditional, Special Focus Two-Year: Health Professions, Special Focus Two-Year: Technical Professions, and Special Focus Two-Year: Other Fields); **Mixed** (Associate’s Colleges: Mixed Transfer/Career & Technical-High Nontraditional, Mixed Transfer/Career & Technical-Mixed Traditional/Nontraditional, and Mixed Transfer/Career & Technical-High Traditional); **Transfer** (Associate’s Colleges: Transfer-High Nontraditional, Transfer-Mixed Traditional/Nontraditional, and Transfer-High Traditional); **Baccalaureate** (Baccalaureate/Associate’s Colleges: Associate’s Dominant and Baccalaureate/Associate’s Colleges: Mixed Baccalaureate/Associate’s). Three of the institutions included in the study were not defined in the 2015 Carnegie universe. These institutions are not included in the Carnegie Classification totals. These institutions are listed in Attachment B.

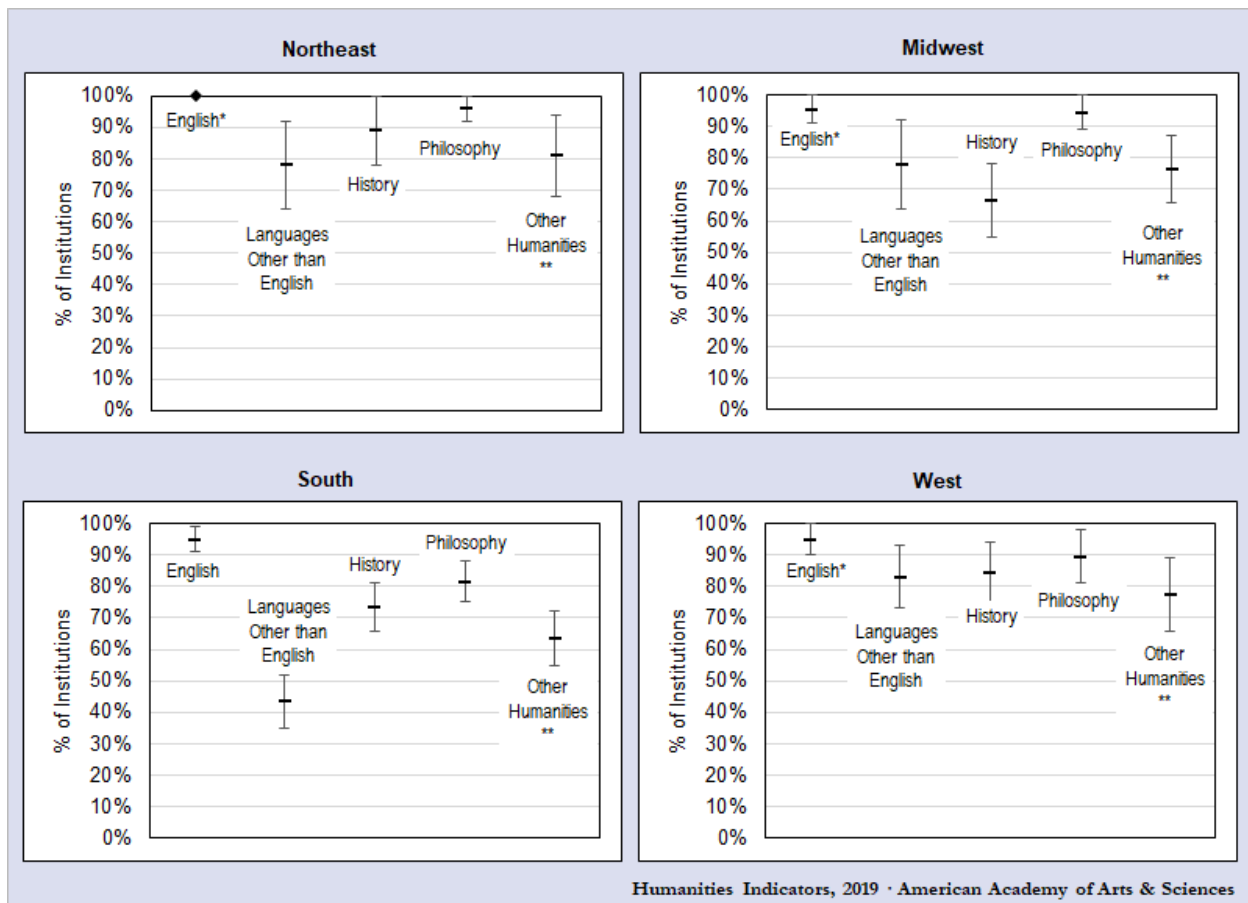
appropriate point of reference is the share of students taking *any* course, i.e. share of total student enrollment, which is represented on the graphs by a dashed orange line.

Key Findings:

- Institutions in the south were less likely to offer LOTE courses (**Figure 8**).
- As mentioned above, when comparing groups of institutions in terms of their share of national enrollment in humanities courses, the point of reference should be their share of *total* enrollment. Community colleges in the south accounted for the largest share of the students taking humanities courses nationally, approximately 38% (over one million in enrollment across all humanities disciplines; **Figure 9**). This share was proportionate to the region's share of community college enrollment (35%; represented on the graph as a dashed orange line).
- Students at western institutions were less likely to be humanities coursetakers than one would expect, based on the share of total enrollment they represented. While western institutions enrolled 33% of the nation's community college students, they were home to only approximately 26% of humanities coursetakers.
- The southern region is notable in that while it represented 35% of community college enrollment, it was home to only 24% (approximately) of the nation's LOTE coursetakers. In contrast, students in the west were *more* likely to take LOTE classes than one would expect, based on the share of total enrollment they represented.
- History coursetakers were overrepresented at southern institutions, constituting approximately 45% of the national total (as compared to 35% of total enrollment). Students at midwestern institutions were particularly likely to take philosophy courses, with approximately 28% having done so, although midwestern students were only 20% of the national community college population.
- When different types of institutions are compared, the data suggest that while English courses were very likely to be offered at every type of institution, colleges with a focus on career and technical education (CTE) were less likely to offer a course in LOTE than other types of institution (**Figure 10**).
- Transfer institutions accounted for the largest number of students enrolled at community colleges, with students who attended such institutions representing almost half of the total student population in the fall term of 2015 (not pictured; see table 5 in the Appendix). Transfer institutions' share of the humanities coursetaker population was proportionate to this (**Figure 11**). With approximately 1.3 million students taking at least one humanities course at a transfer institution, this type of institution provided humanities education to a far larger number of students than any other.

- Transfer colleges accounted for a disproportionately large share of community college students taking courses in LOTE and history (approximately 56% and 53%, respectively, of the students taking such courses). As one might expect in view of the finding that CTE institutions were less likely than other types of schools to offer LOTE courses, students at these institutions were underrepresented among the LOTE coursetaking population.

Figure 8: Share of Community Colleges Offering at Least One Course in the Humanities, by Discipline and Region, Fall 2015



The middle bar depicts the estimated proportion, and the upper and lower bars depict the range of uncertainty.

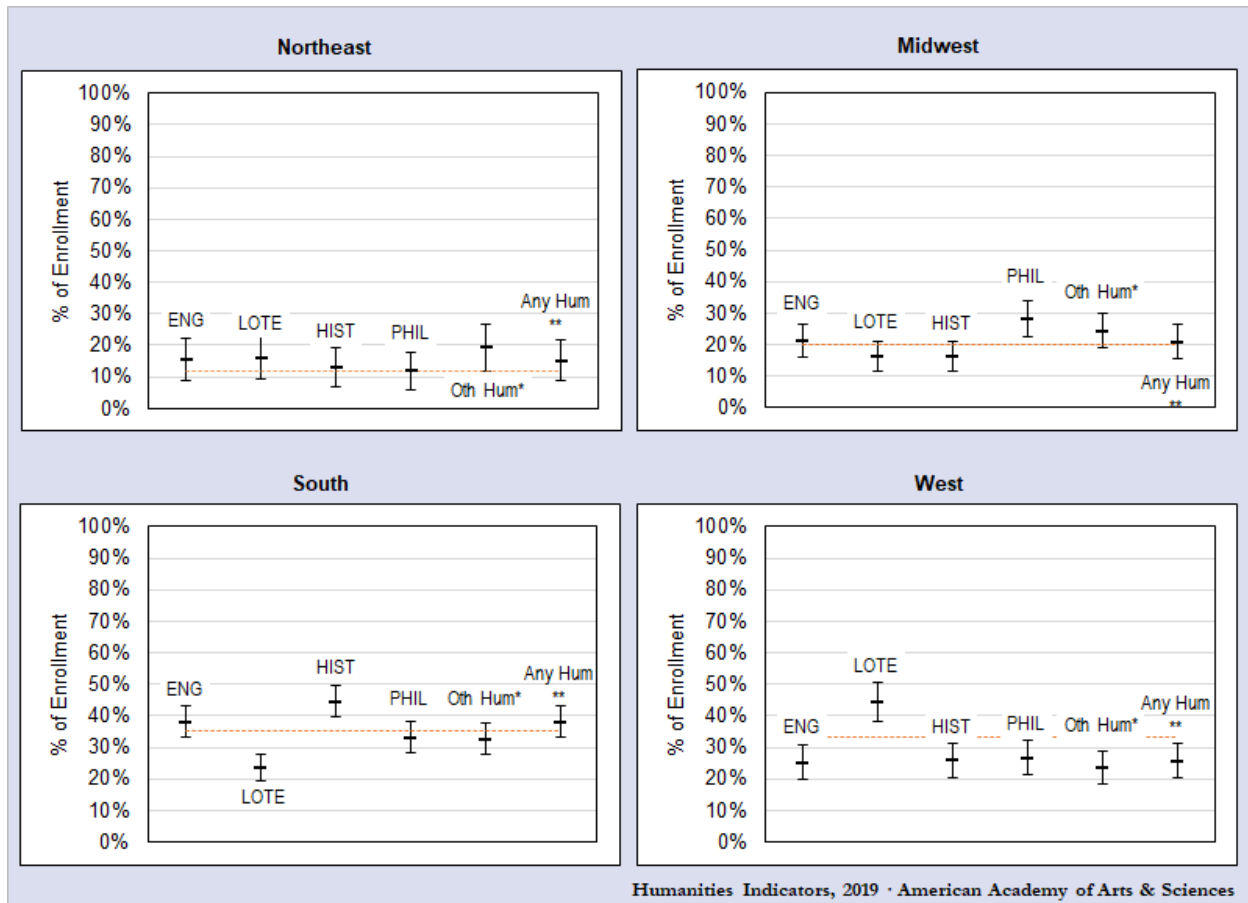
♦ All the responding institutions in the northeast offer English; it is possible that some of the non-responding institutions in this region do not offer English.

* Even though an interval extends to 100%, we know that not all institutions in the region offer a course in the discipline.

** Includes: 1) survey courses entitled “Humanities”; and 2) courses coded in colleges’ information systems as humanities but not counted in the other disciplinary categories.

Nine institutions included in the study are located in US territories; their data are not included in this table. For the values underlying this figure, see Appendix, tables E3, FL3, H3, P3, and OH3.

Figure 9: Regional Distribution of Humanities Coursetakers at Community Colleges, by Discipline, Fall 2015



ENG: English • LOTE: Languages Other than English • HIST: History • PHIL: Philosophy

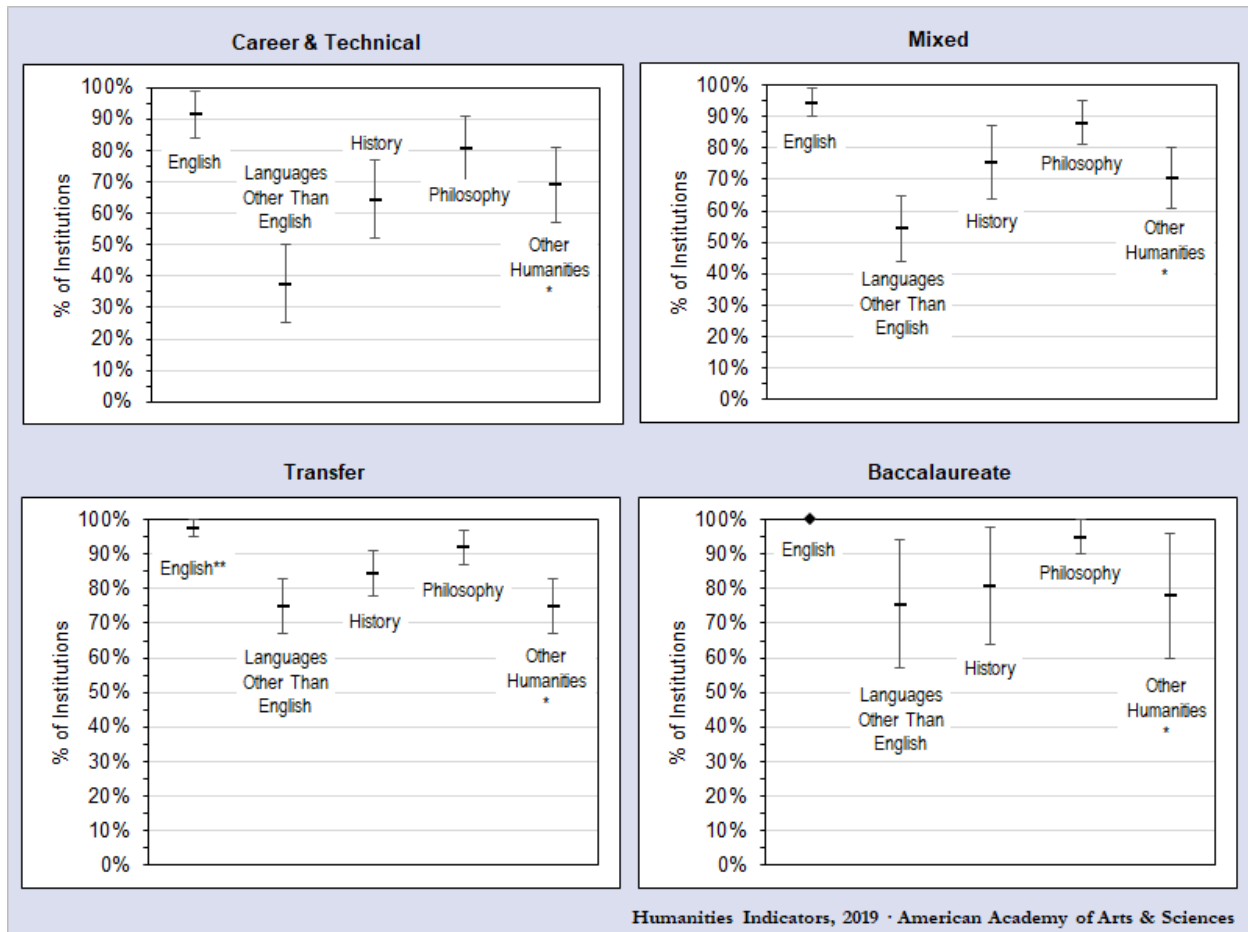
The middle bar depicts the estimated proportion, and the upper and lower bars depict the range of uncertainty. The orange dashed line indicates the proportion of total community college enrollment in each region.

* Oth Hum: Other humanities, includes: 1) survey courses entitled “Humanities”; and 2) courses coded in colleges’ information systems as humanities that were not counted in the other disciplinary categories.

** Any Hum: Any humanities course.

Nine institutions included in the study are located in US territories; their data were excluded from this analysis. These data were calculated by SRC staff for the Humanities Indicators.

Figure 10: Share of Community Colleges Offering at Least One Humanities Course, by Discipline and Institution Type, Fall 2015



The middle bar depicts the estimated proportion, and the upper and lower bars depict the range of uncertainty.

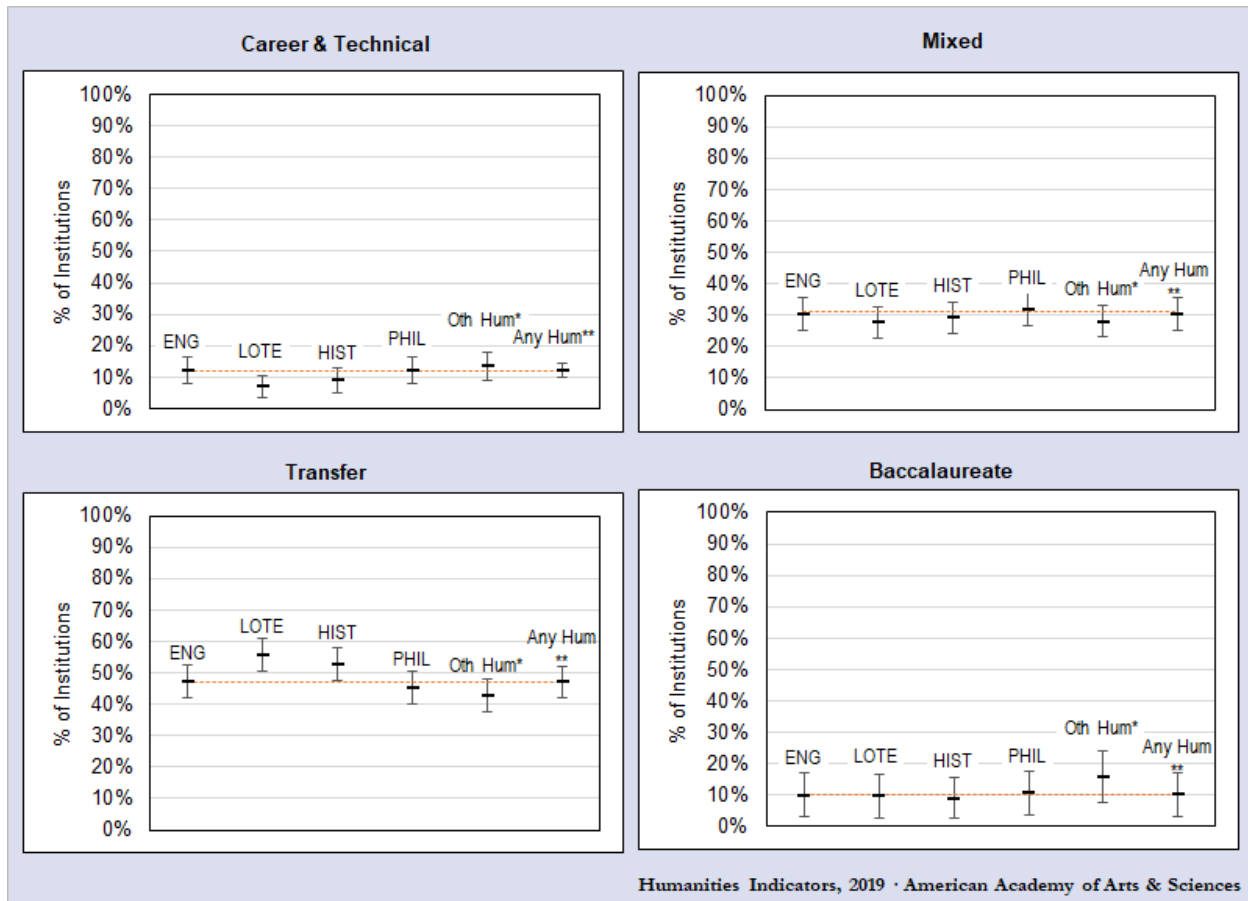
♦ All the responding baccalaureate institutions in this group offer English; it is possible that some of the non-responding institutions of this type do not offer English.

* Includes: 1) survey courses entitled “Humanities”; and 2) courses coded in colleges’ information systems as humanities that were not counted in the other disciplinary categories.

** Even though the bounds for the proportion of schools offering English among transfer institutions extends to 100%, we know that there are transfer institutions that do not offer English.

Three institutions included in the study were not part of the 2015 Carnegie universe; their data have been excluded from this analysis. For the values underlying this figure, see Appendix, tables E4, FL4, H4, P4, and OH4.

Figure 11: Distribution of Humanities Coursetakers at Community Colleges Across Institution Types, by Discipline, Fall 2015



ENG: English • LOTE: Languages Other than English • HIST: History • PHIL: Philosophy

The middle bar depicts the estimated proportion, and the upper and lower bars depict the range of uncertainty. The orange dashed line indicates the proportion of total community college enrollment in each institution type.

* Oth Hum: Other humanities, includes: 1) survey courses entitled “Humanities”; and 2) courses coded in colleges’ information systems as humanities that were not counted in the other disciplinary categories.

** Any Hum: Any humanities course

Three institutions included in the study were not part of the 2015 Carnegie universe; their data have been excluded from this analysis. These data were calculated by SRC staff for the Humanities Indicators.

High School Students and Humanities Education at Community Colleges

Dual enrollment, which allows students to take courses for college credit while still enrolled in high school, is increasingly widespread, with many state education agencies actively promoting the practice. While both two- and four-year colleges and universities offer these programs, high school students are more likely to be enrolled at community colleges.⁹ Research indicates that students who earn dual enrollment credits are more likely to attend college, earn a higher grade point average, and make swifter progress toward a college degree.¹⁰ While reducing the cost of higher education for some families, dual enrollment has been criticized for exacerbating inequality, since participants tend to be well-resourced white students.¹¹ Some humanities faculty at four-year colleges and universities worry that dual enrollment drives down enrollment at their institutions.¹² Other observers worry about the rigor and scope of such courses, particularly when they are offered for community college credit but taught by secondary school instructors.¹³ This study does not speak to the impact of dual enrollment, but it does indicate the number and distribution of high school students in the ecosystem of humanities education at community colleges.

Key Findings:

- Between 270,000 and 294,100 high school students were enrolled in at least one humanities course at a community college in fall 2015 (**Figure 12**). The number of students enrolled in English classes in total (estimated at 256,000–280,000) was almost equal to that, with approximately 200,000 high school students enrolled in other humanities subjects. This suggests that high school students tend to take more than one community college course per term.

⁹ Stephanie Marken et al., *Dual Enrollment Programs and Courses for High School Students at Postsecondary Institutions: 2010–11* (Washington, DC: US Department of Education, 2013), Table 1. See also John Fink, Davis Jenkins, and Takeshi Yanagiura, *What Happens to Students Who Take Community College “Dual Enrollment” Courses in High School?* (New York: Community College Research Center and National Student Clearinghouse Research Center, 2017).

¹⁰ Melissa Merchur Karp et al., *The Postsecondary Achievement of Participants in Dual Enrollment: An Analysis of Student Outcomes in Two States* (Minneapolis: National Research Center for Career and Technical Education, 2007).

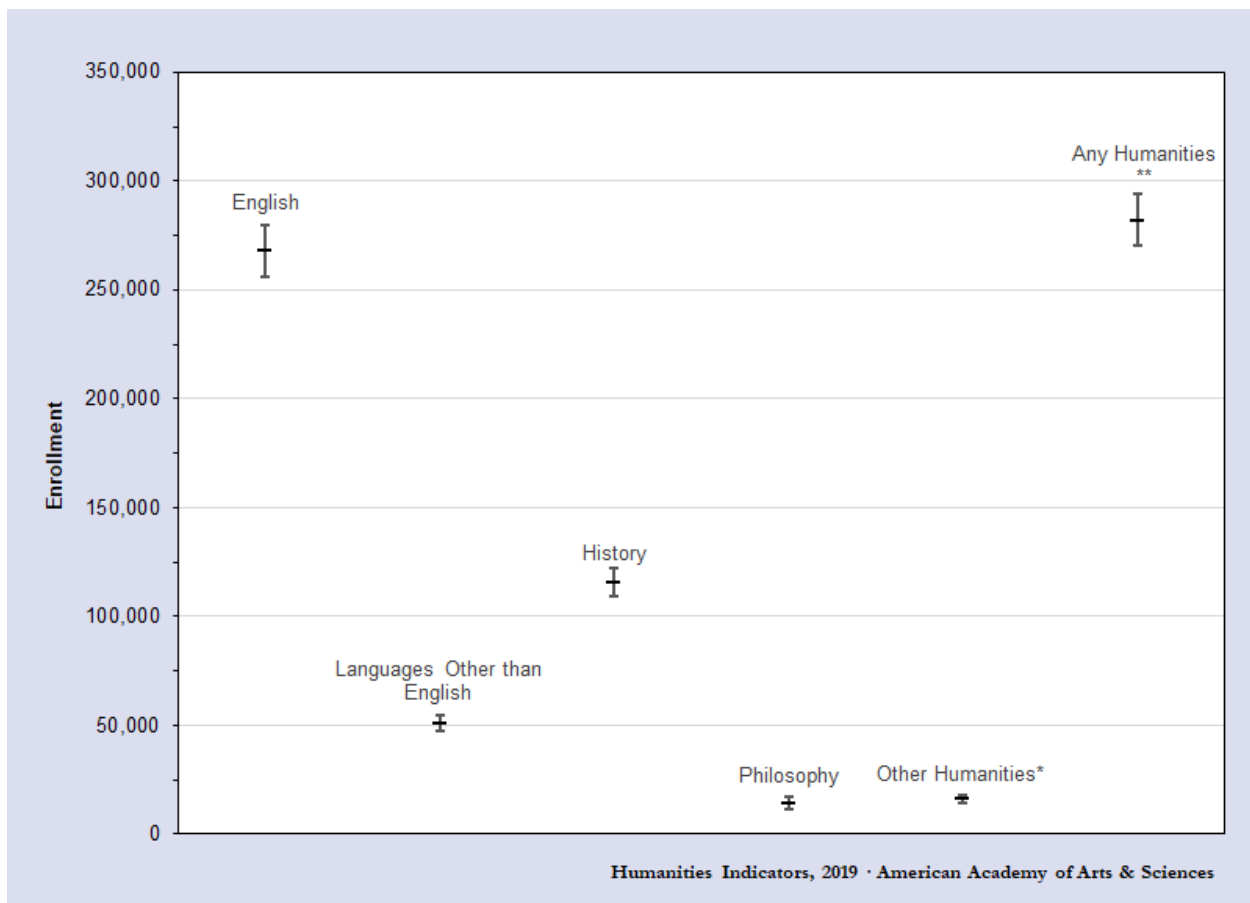
¹¹ Erik Gilbert, “How Dual Enrollment Contributes to Inequality,” *Chronicle of Higher Education*, November 5, 2017, <https://www.chronicle.com/article/How-Dual-Enrollment/241668> (accessed 12/12/2018).

¹² See, for instance, the Forum, “Is High School the Future of Higher Education,” *Perspectives on History*, September 2015, available online at <https://www.historians.org/publications-and-directories/perspectives-on-history/september-2015-x40815>.

¹³ Scott Jaschik, “Dual Enrollment, Multiple Issues,” *Inside Higher Ed*, August 30, 2018, <https://www.insidehighered.com/admissions/article/2018/08/20/study-finds-mixed-impact-dual-enrollment> (accessed 12/13/2018).

- More than 90% of community colleges had high school students enrolled in at least one humanities course at their institution, but there were substantial differences among the disciplines in the shares of institutions at which this was occurring (**Figure 13**). Between 87% and 95% of community colleges had high school students taking a course in English, and between 69% and 79% had high school students enrolled in history courses. Considerably fewer community colleges had dual enrollment students taking LOTE classes or philosophy courses.
- Humanities coursetakers were likeliest to be a high school student in Southern and Midwestern schools, with dually enrolled students making up 10% of humanities enrollment (**Figure 14**). The share of humanities coursetakers who were dual enrollment students was smallest at community colleges in the Northeast, approximately 6%. However, within each of these regions there were substantial differences in the shares that dually enrolled high school students in particular disciplines. In the Northeast, for instance, the share of LOTE coursetakers who were in high school was almost twice as large as the share of dually enrolled students in any other type of humanities course.

Figure 12: Dually Enrolled High School Students Taking at Least One Humanities Course at a Community College, by Discipline, Fall 2015



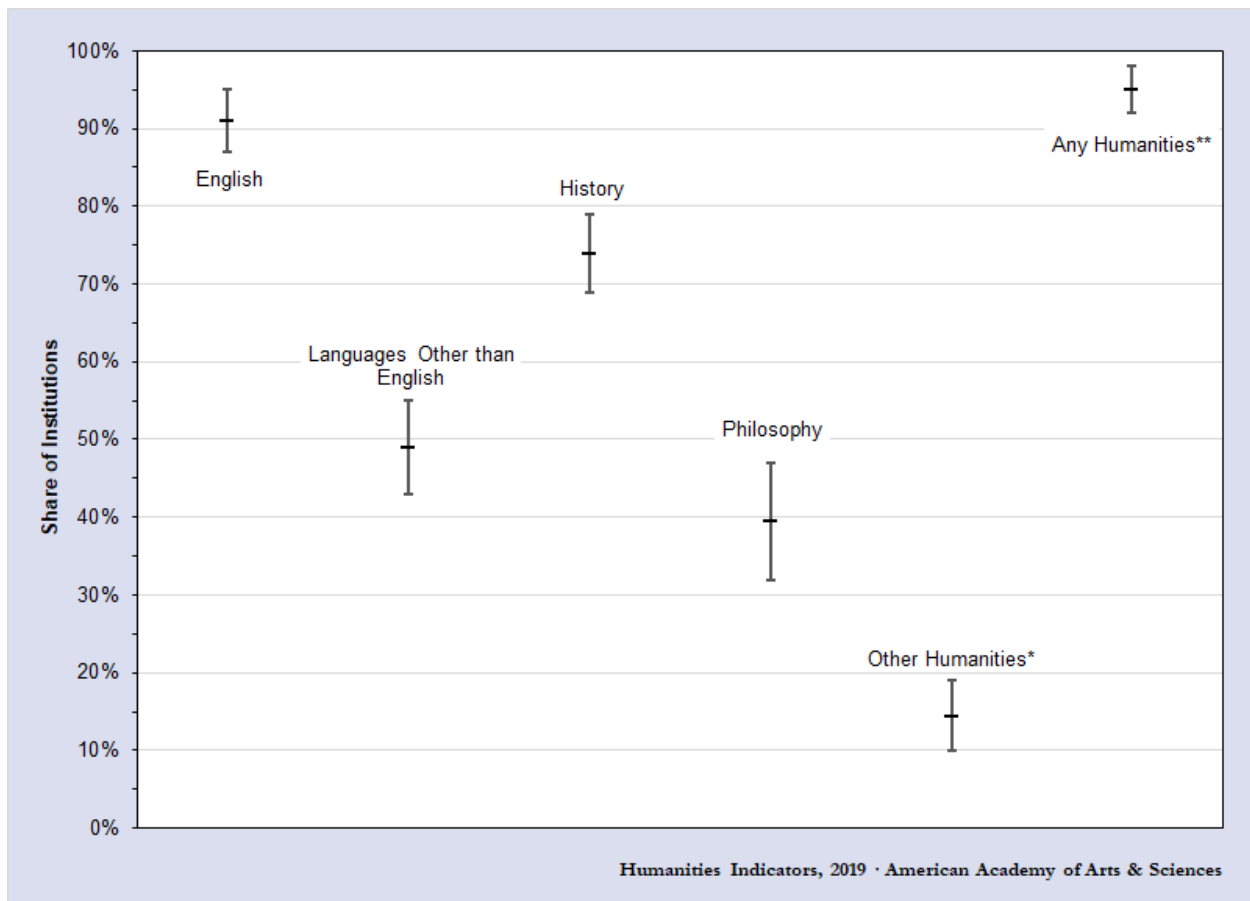
The middle bar depicts the estimated enrollment, and the upper and lower bars depict the range of uncertainty.

* Includes: 1) survey courses entitled “Humanities”; and 2) courses coded in colleges’ information systems as humanities but not counted in the other disciplinary categories.

** The estimated value for “Any Humanities Course” is unduplicated and thus less than the sum of the values for the individual disciplines.

For the values underlying this figure, see Appendix, tables 10, E5, FL5, H5, P5, and OH5.

Figure 13: Share of Community Colleges with Dually Enrolled High School Students Taking Humanities Courses, by Discipline, Fall 2015



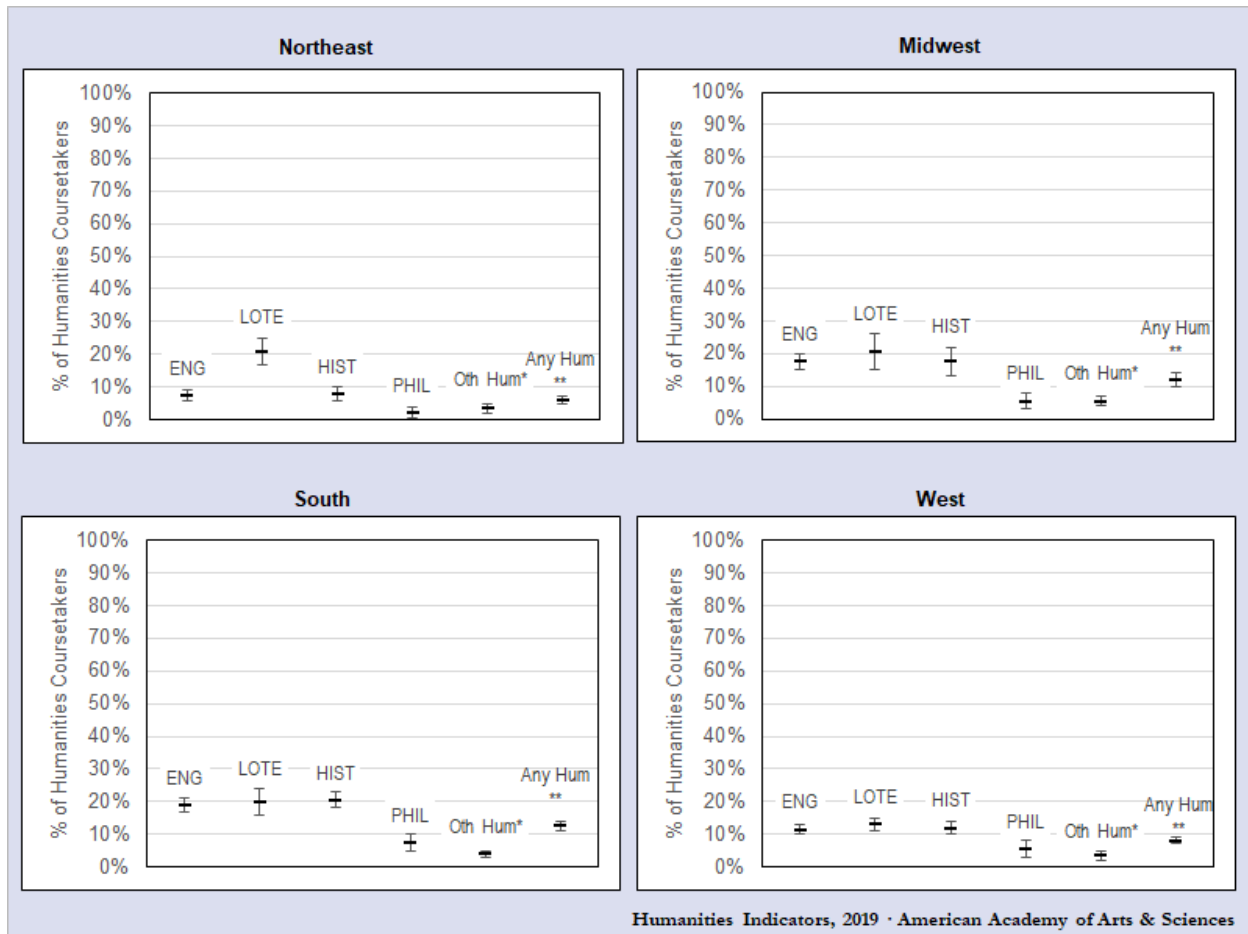
The middle bar depicts the estimated proportion, and the upper and lower bars depict the range of uncertainty.

* Includes: 1) survey courses entitled “Humanities”; and 2) courses coded in colleges’ information systems as humanities but not counted in the other disciplinary categories.

** The estimated value for “Any Humanities Course” is unduplicated and thus less than the sum of the values for the individual disciplines.

For the values underlying this figure, see Appendix, tables 5: E5, FL5, H5, P5, and OH5.

Figure 14: Dually Enrolled High School Students as a Share of Community College Coursetakers in Selected Humanities Disciplines, by Region, Fall 2015



ENG: English • LOTE: Languages Other than English • HIST: History • PHIL: Philosophy

The middle bar depicts the estimated proportion, and the upper and lower bars depict the range of uncertainty.

* Oth Hum: Other humanities, includes: 1) survey courses entitled “Humanities”; and 2) courses coded in colleges’ information systems as humanities but not counted in the other disciplinary categories.

** Any Hum: Any humanities course

Nine institutions included in the study are located in US territories; their data were excluded from this analysis. For the values underlying this figure, see Appendix, tables 12, E7, FL7, H7, P7, and OH7.

Appendix: Tables and Summary of Methodology Prepared by
Susan White, Raymond Chu, and John Tyler from the Statistical
Research Center at the American Institute of Physics

Table 1: All Students Enrolled in For-Credit, College-Level Courses and
Faculty Members at Two-Year Colleges, Fall 2015

	Low estimate	High estimate
Number of students enrolled (IPEDS)	6,882,150	
Average size (Number of students)	7,124	
Total number of faculty members	339,500	353,900
Student-to-faculty ratio	19.4	20.3

Table 2: All Students Enrolled in For-Credit, College-Level Courses and
Faculty Members at Two-Year Colleges, by Size, Fall 2015

	Small		Medium		Large	
	Low estimate	High estimate	Low estimate	High estimate	Low estimate	High estimate
Number of institutions	193 (20%)		566 (59%)		207 (21%)	
Number of students enrolled	249,150 (4%)		2,797,650 (41%)		3,835,350 (56%)	
Average size (Number of students)	1,291		4,943		18,528	
Number of faculty members	22,600	26,500	153,900	163,500	158,400	168,500
Student-to-faculty ratio	9.4	11.0	17.1	18.2	22.8	24.2

Percentages in table may not sum to 100% due to rounding.

Table 3: All Students Enrolled in For-Credit, College-Level Courses and Faculty Members at Two-Year Colleges, by US Census Bureau Region, Fall 2015

	Northeast		South		Midwest		West	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Number of institutions	114 (12%)		365 (38%)		232 (24%)		246 (26%)	
Number of students enrolled	800,650 (12%)		2,432,500 (35%)		1,384,200 (20%)		2,254,500 (33%)	
Average size (Number of students)	7,023		6,664		5,966		9,165	
Number of faculty members	47,300	52,150	116,900	124,750	74,000	81,100	93,500	102,000
Student-to-faculty ratio	15.4	16.9	19.5	20.8	17.1	18.7	22.1	24.1

Nine institutions included in the study are located in US territories; their data are not included in this table.
For this reason, the percentages do not necessarily sum to 100%

Table 4: Number of Institutions and Number of Students Enrolled in For-Credit, College-Level Courses, by Size and US Census Bureau Region, Fall 2015*

			Size of Institution			
			Small	Medium	Large	Total
US Census Bureau Region	Northeast	Number of schools	16	72	26	114
		Total enrollment	20,640	385,460	394,550	800,650
		Average enrollment	1,290	5,354	15,175	7,023
	South	Number of schools	82	224	59	365
		Total enrollment	110,310	1,047,570	1,274,620	2,432,500
		Average enrollment	1,345	4,677	21,604	6,664
	Midwest	Number of schools	54	141	37	232
		Total enrollment	72,440	661,340	650,420	1,384,200
		Average enrollment	1,341	4,690	17,579	5,966
	West	Number of schools	34	127	85	246
		Total enrollment	40,050	698,700	1,515,750	2,254,500
		Average enrollment	1,178	5,502	17,832	9,165
	Total	Number of schools	186*	564*	207	957*
		Total enrollment	243,440*	2,793,070*	3,835,340	6,871,850*
		Average enrollment	1,309*	4,952*	18,528	7,181*

* 10,300 students were enrolled at 9 institutions in US territories; these are not included in the table.

Table 5: All Students Enrolled in For-Credit, College-Level Courses and Faculty Members at Two-Year Colleges, by Carnegie Classification, Fall 2015

	Career & Technical		Mixed		Transfer		Baccalaureate	
	Low estimate	High estimate	Low estimate	High estimate	Low estimate	High estimate	Low estimate	High estimate
Number of institutions	218 (23%)		316 (33%)		355 (37%)		74 (8%)	
Number of students enrolled	847,950 (12%)		2,141,400 (31%)		3,202,500 (47%)		682,550 (10%)	
Average size (Number of students)	3,890		6,777		9,021		9,224	
Number of faculty members	51,300	57,000	105,000	112,850	145,750	154,900	30,200	35,600
Student-to-faculty ratio	14.9	16.5	19.0	20.4	20.7	22.0	19.2	22.6

Three institutions included in the study are not included in the 2015 Carnegie universe; their data are not included in this table.

For this reason, the percentages do not necessarily sum to 100%

Table 6: Unduplicated Enrollments in For-Credit, College-Level Humanities Courses in Two-Year Colleges, Fall 2015

	Low estimate	High estimate
English	1,736,000	1,819,000
Foreign Languages	298,700	323,100
History	698,000	753,600
Philosophy	255,500	274,700
Other Humanities	391,900	449,500
Any Humanities Course*	2,736,000	2,870,000

* This is the estimated total unduplicated enrollment in all for-credit, college-level humanities courses at two-year colleges for the fall semester of the 2015-16 academic year.

Table 7: Unduplicated Enrollments in For-Credit, College-Level Humanities Courses at Two-Year Colleges, by Size, Fall 2015

	Small		Medium		Large	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
English	76,300	88,100	736,800	769,600	904,500	979,700
Foreign Languages	5,750	9,250	97,700	109,700	189,200	210,200
History	21,200	28,000	259,900	281,400	405,200	456,000
Philosophy	12,700	16,900	95,600	105,500	141,800	157,700
Other Humanities	26,900	43,600	187,900	229,600	158,800	194,600
Any Humanities*	124,400	148,200	1,161,000	1,215,000	1,419,000	1,539,000

* This is the estimated total unduplicated enrollment in all for-credit, college-level humanities courses at two-year colleges for the fall semester of the 2015-16 academic year.

Table 8: Unduplicated Enrollments in For-Credit, College-Level Humanities Courses at Two-Year Colleges, by US Census Bureau Region, Fall 2015

	Northeast		South		Midwest		West	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
English	262,100	288,900	649,100	703,800	357,600	392,100	425,500	469,700
Foreign Languages	45,300	53,100	67,300	78,900	45,100	56,500	129,500	146,100
History	88,300	103,000	306,200	341,200	104,300	131,600	173,100	203,100
Philosophy	28,200	34,800	82,400	93,300	69,900	79,500	65,100	75,700
Other Humanities	67,600	94,200	121,200	152,700	86,700	117,700	86,200	111,600
Any Humanities*	404,500	447,200	1,024,000	1,111,000	556,100	617,900	683,100	752,500

* This is the total unduplicated enrollment in all for-credit, college-level humanities courses at two-year colleges for the fall semester of the 2015-16 academic year.

Nine institutions included in the study are located in US territories; their data are not included in this table.

Table 9: Unduplicated Enrollments in For-Credit, College-Level Humanities Courses at Two-Year Colleges, by Carnegie Classification, Fall 2015

	Career & Technical		Mixed		Transfer		Baccalaureate	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
English	207,800	226,400	518,300	563,500	806,500	867,700	167,300	194,300
Foreign Languages	18,500	25,100	79,100	93,100	163,900	181,300	26,600	33,800
History	59,600	70,200	197,100	228,300	362,000	401,100	55,300	77,200
Philosophy	29,000	35,100	79,300	88,900	113,800	127,000	24,300	32,300
Other Humanities	45,600	67,200	102,800	131,700	160,500	197,700	54,800	79,600
Any Humanities*	325,700	357,500	815,300	889,100	1,269,000	1,366,000	266,300	311,900

* This is the estimated total unduplicated enrollment in all for-credit, college-level humanities courses at two-year colleges for the fall semester of the 2015-16 academic year.

Three institutions included in the study are not included in the 2015 Carnegie universe; their data are not included in this table.

Table 10: Unduplicated Enrollments for High School Students in at Least One For-Credit, College-Level Humanities Courses at Two-Year Colleges, Fall 2015

	Low estimate	High estimate
Total	270,000	294,100
% of All Enrollments	9%	11%
% of Institutions with High School Students Enrolled in At Least One Humanities Course	92%	98%

Table 11: Unduplicated Enrollments for High School Students in at Least One For-Credit, College-Level Humanities Course at Two-Year Colleges, by Size, Fall 2015

	Small		Medium		Large	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Total	24,700	30,000	145,700	157,700	93,000	113,100
% of All Enrollments	17%	24%	12%	14%	6%	8%
% of Institutions with High School Students Enrolled in At Least One Humanities Course	85%	100%*	90%	99%	93%	100%*

* The upper bound for the estimate is 100%; however, at least some institutions have no high school enrolled.

Table 12: Unduplicated Enrollments for High School Students in at Least One For-Credit, College-Level Humanities Course at Two-Year Colleges, by US Census Bureau Region, Fall 2015

	Northeast		South		Midwest		West	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Total	20,600	26,300	123,000	140,000	64,400	77,000	50,700	60,500
% of All Enrollments	5%	7%	11%	14%	10%	14%	7%	9%
% of Institutions with High School Students Enrolled in At Least One Humanities Course	91%	100%*	92%	100%	86%	100%*	86%	100%*

Nine institutions included in the study are located in US territories; their data are not included in this table.

* The upper bound for the estimate is 100%; however, at least some institutions have no high school enrolled.

Table 13: Unduplicated Enrollments for High School Students in at Least One For-Credit, College-Level Humanities Course at Two-Year Colleges, by Carnegie Classification, Fall 2015

	Career & Technical		Mixed		Transfer		Baccalaureate	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Total	40,900	47,200	83,100	93,700	96,700	111,600	37,900	52,100
% of All Enrollments	11%	14%	9%	11%	7%	9%	12%	20%
% of Institutions with High School Students Enrolled in at Least One Humanities Course	78%	100%*	92%	100%*	93%	100%*	‡	

‡ All of the responding institutions in this group have high school students enrolled in at least one humanities course; it is possible that some of the non-responding institutions have no high school students enrolled.

* The upper bound for the estimate is 100%; however, at least some institutions have no high school enrolled.

Three institutions included in the study are not included in the 2015 Carnegie universe; their data are not included in this table.

Table 14: Unduplicated Head Count of Faculty Members Teaching Humanities Courses in Two-Year Colleges, Fall 2015

	Low estimate	High estimate
English	36,100	37,900
Foreign Languages	11,300	12,200
History	14,200	14,900
Philosophy	4,950	5,250
Other Humanities	18,600	20,900
Total for All Humanities Courses	67,800	70,600

Table 15: Unduplicated Head Count of Faculty Members Teaching For-Credit, College-Level Humanities Courses at Two-Year Colleges, by Size, Fall 2015

	Small		Medium		Large	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
English	2,700	3,050	16,200	17,100	16,700	18,300
Foreign Languages	600	800	5,300	5,750	5,200	5,850
History	1,300	1,450	6,950	7,350	5,800	6,350
Philosophy	500	600	2,300	2,550	2,050	2,200
Other Humanities	3,150	4,100	11,200	13,000	3,450	4,650
Total for All Humanities Courses	4,850	5,800	31,200	33,000	30,800	32,800

Table 16: Unduplicated Head Count of Faculty Members Teaching For-Credit, College-Level Humanities Courses at Two-Year Colleges, by US Census Bureau Region, Fall 2015

	Northeast		South		Midwest		West	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
English	5,800	6,400	11,900	13,000	8,150	9,000	9,250	10,300
Foreign Languages	1,700	1,950	2,850	3,300	2,100	2,450	4,250	4,850
History	2,050	2,300	5,600	6,000	2,550	2,900	3,650	4,050
Philosophy	600	700	1,650	1,850	1,350	1,500	1,200	1,350
Other Humanities	2,600	3,450	5,300	6,450	4,550	5,900	4,800	6,000
Total for All Humanities Courses	10,800	11,800	22,500	24,000	14,600	16,100	18,000	19,900

Nine institutions included in the study are located in US territories; their data are not included in this table.

Table 17: Unduplicated Head Count of Faculty Members Teaching For-Credit, College-Level Humanities Courses at Two-Year Colleges, by Carnegie Classification, Fall 2015

	Career & Technical		Mixed		Transfer		Baccalaureate	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
English	4,650	5,150	11,300	12,200	16,400	17,600	2,900	3,650
Foreign Languages	1,200	1,450	3,300	3,750	5,450	6,100	950	1,250
History	2,150	2,350	4,250	4,650	6,350	6,850	1,150	1,400
Philosophy	800	950	1,550	1,750	2,000	2,150	450	550
Other Humanities	3,400	4,300	5,300	6,600	7,150	8,550	1,600	2,550
Any Humanities*	9,100	10,100	20,800	22,300	30,800	32,700	5,700	6,750

* This is the estimated total unduplicated enrollment in all for-credit, college-level humanities courses at two-year colleges for the fall semester of the 2015-16 academic year.

Three institutions included in the study are not included in the 2015 Carnegie universe; their data are not included in this table.

Supplemental Tables

Table S1: Proportion of All Faculty Teaching At Least One Humanities Course

	Low estimate	High estimate
Overall	19.2%	20.8%
By Size		
Small	18.4%	25.7%
Medium	19.1%	21.4%
Large	18.3%	20.7%
By US Census Bureau Region		
Northeast	20.7%	25.0%
South	18.0%	20.6%
Midwest	18.0%	21.8%
West	17.9%	21.2%
By Carnegie Classification		
Career & Technical	16.0%	19.8%
Mixed	18.4%	21.2%
Transfer	19.9%	22.4%
Baccalaureate	16.0%	22.4%

Table S2: Student-Teacher Ratio: All Students Enrolled in Any Humanities Course and All Teachers Teaching At Least One Humanities Course

	Low estimate	High estimate
Overall	38.7	42.3
By Size		
Small	21.5	30.4
Medium	35.2	39.0
Large	43.2	50.0
By US Census Bureau Region		
Northeast	34.3	41.3
South	42.6	49.4
Midwest	34.5	42.2
West	34.4	41.2
By Carnegie Classification		
Career & Technical	32.1	39.2
Mixed	36.6	42.8
Transfer	38.8	44.4
Baccalaureate	39.4	54.8

Interpreting the Results

Astute readers may have noticed that the low and high estimates one can calculate by adding the numbers for each Size of institution or for each US Census Bureau region do not equal the low and high estimates given for all institutions. This is not an error; rather, it is expected. We look at why it is expected and how to interpret the estimates when comparing across different classifications.

Why does the sum of the estimates for each of the subsets not equal the overall national estimate?

The technical answer is that the error is a function of $1/\sqrt{n}$, where n is the sample size (number of respondents). As n increases, \sqrt{n} also increases, but not as quickly as n increases. Since the denominator is increasing, the overall fraction—and the error—are decreasing.

For each of the subsets, whether institution size or US Census Bureau region, the number of respondents is less than it is for the overall total. So, any subset will have a larger error (relatively) than the overall total. That means that the sum of the low estimates for any group will be less than the overall low estimate, and the sum of the high estimates will be higher.

Another way to conceptualize this is to think of trying to estimate the number of students enrolled in humanities courses is akin to throwing a ball at a target. It will be easier to hit a larger target (a national total) than a smaller target (say, Small institutions). Said another way, one is less likely to miss a larger target—there will be less error. As the target gets smaller (any subset), it gets harder to hit—more error.

How do I compare the estimates for one group with the estimates for another group?

All of the estimates are presented as a range. If two ranges do not overlap, there is evidence to suggest that there is a difference.

For example, we estimate that average student-to-faculty ratio at all two-year colleges for the Fall 2015 semester is between 19.4 and 20.3. (See Table 1 on page 1.) We also estimate that this ratio is between 15.4 and 16.9 for two-year colleges in the Northeast region. (See Table 3 on page 2.) Since the interval 15.4 to 16.9 falls entirely below the interval 19.4 to 20.3, there is evidence to suggest that institutions in the Northeast have, on average, fewer students per faculty member than the national average.

Why are some of the high estimates for the proportion of institutions in a group 100%?

The low and high estimates shown result from statistical formulas, and the width of the interval between the two estimates gives insight into the level of “certainty” of the estimates. In some instances, the result of the formula exceeds 100% for the high estimate. In this case, the high estimate is capped at 100% because it is not possible to have more than 100% of a group. In most cases, we already know that not 100% of the institutions offer the course shown because at least some of the responding institutions did not offer it. However, we include 100% in the interval because that is the result of the formula, and it gives some idea of the level of certainty.

Why are there some instances where no low and high estimates are provided for the proportion of institutions in a group?

For some groups, all the responding institutions in that group offered the course. In this case, we cannot compute the low and high estimates for the proportion of schools. We used multiple imputation to estimate missing data and data from non-respondents. In general, imputation is the process of replacing missing data. As the term multiple suggests, multiple imputation consists of performing the replacement process¹⁴ for a single value multiple times. That means, there are multiple instances of an estimate. The imputations suggest the possibility that not every institution in a particular group offers the course. However, when all the responding institutions in a particular group indicated offering the course, we are not able to calculate an estimate for the proportion from the data. Appendix C has more information on the imputations and how the estimates were derived.

¹⁴ More detailed information on the multiple imputation process used in our analysis is available in Appendix C.

English at Two-Year Colleges

Table E1: Unduplicated Head Counts of All Students Enrolled in and Faculty Members Teaching For-Credit, College-Level English Courses at Two-Year Colleges, Fall 2015

	Low estimate	High estimate
Students enrolled	1,736,000	1,819,000
% of all enrollment	25.2%	26.4%
% of institutions offering English	93%	98%
% of enrollment at institutions offering English	97%	100%*
Faculty members teaching English	36,100	37,900
% of all faculty members teaching English	10.2%	11.2%
Student-to-faculty ratio	45.8	50.4

* The upper bound for the estimate is 100%; however, at least some students attend an institution where English is not offered since at least some institutions do not offer English.

Table E2: Unduplicated Head Counts of All Students Enrolled in and Faculty Members Teaching For-Credit, College-Level English Courses at Two-Year Colleges, by Size of Institution, Fall 2015

	Small		Medium		Large	
	Low estimate	High estimate	Low estimate	High estimate	Low estimate	High estimate
Students enrolled	76,300	88,100	736,800	769,600	904,500	979,700
% of all enrollment	30.6%	35.4%	26.3%	27.5%	23.6%	25.5%
% of institutions offering English	78%	97%	94%	99%	‡	
% of enrollment at institutions offering English	81%	99%	96%	100%*	‡	
Faculty members teaching English	2,700	3,050	16,200	17,100	16,700	18,300
% of all faculty members teaching English	10.1%	13.5%	9.9%	11.1%	9.9%	11.5%
Student-to-faculty ratio	25.0	32.6	43.1	47.5	49.4	58.7

* The upper bound for the estimate is 100%; however, at least some students attend an institution where English is not offered since at least some institutions do not offer English.

‡ All of the responding institutions in this group offer English; it is possible that some of the non-responding institutions do not offer English.

Table E3: Unduplicated Head Counts of All Students Enrolled in and Faculty Members Teaching For-Credit, College-Level English Courses at Two-Year Colleges, by US Census Bureau Region, Fall 2015

	Northeast		South		Midwest		West	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Students enrolled	262,100	288,900	649,100	703,800	357,600	392,100	425,500	469,700
% of all enrollment	32.7%	36.1%	26.7%	28.9%	25.8%	28.3%	18.9%	20.8%
% of institutions offering English	‡		91%	99%	91%	100%*	89%	100%*
% of enrollment at institutions offering English	‡		96%	100%*	95%	100%*	96%	100%*
Faculty members teaching English	5,800	6,400	11,900	13,000	8,150	9,000	9,250	10,300
% of all faculty members teaching English	11.1%	13.5%	9.5%	11.1%	10.1%	12.2%	9.1%	11.0%
Student-to-faculty ratio	41.0	49.8	49.9	59.1	39.7	48.1	41.3	50.8

Nine institutions included in the study are located in US territories; their data are not included in this table.

* The upper bound for the estimate is 100%; however, at least some students attend an institution where English is not offered and at least some institutions do not offer English.

‡ All of the responding institutions in this group offer English; it is possible that some of the non-responding institutions do not offer English.

Table E4: Unduplicated Head Counts of All Students Enrolled in and Faculty Members Teaching For-Credit, College-Level English Courses at Two-Year Colleges, by Carnegie Classification, Fall 2015

	Career & Technical		Mixed		Transfer		Baccalaureate	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Students enrolled	207,800	226,400	518,300	563,500	806,500	867,700	167,300	194,300
% of all enrollment	24.5%	26.7%	24.2%	26.3%	25.2%	27.1%	24.5%	28.5%
% of institutions offering English	84%	99%	90%	99%	95%	100%*	‡	
% of enrollment at institutions offering English	91%	100%*	95%	100%*	98%	100%*	‡	
Faculty members teaching English	4,650	5,150	11,300	12,200	16,400	17,600	2,900	3,650
% of all faculty members teaching English	8.2%	10.0%	10.0%	11.7%	10.6%	12.1%	8.1%	12.1%
Student-to-faculty ratio	40.3	48.7	42.5	49.9	45.8	52.9	45.8	67.0

Three institutions included in the study are not included in the 2015 Carnegie universe; their data are not included in this table.

* The upper bound for the estimate is 100%; however, at least some students attend an institution where English is not offered and at least some institutions do not offer English.

‡ All of the responding institutions in this group offer English; it is possible that some of the non-responding institutions do not offer English.

Table E5: Unduplicated Head Counts of High School Students Enrolled in For-Credit, College-Level English Courses at Two-Year Colleges, Fall 2015

	Low estimate	High estimate
Total students enrolled	1,736,000	1,819,000
High school students enrolled	256,000	280,000
% of high school students in total English enrollment	14%	16%
% of institutions with high school students enrolled in an English course	87%	95%

Table E6: Unduplicated Head Counts of High School Students Enrolled in For-Credit, College-Level English Courses at Two-Year Colleges by Size of Institution, Fall 2015

	Small		Medium		Large	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Total students enrolled	76,300	88,100	736,800	769,600	904,500	979,700
High school students enrolled	22,400	27,400	141,800	153,800	85,200	105,300
% of high school students in total English enrollment	25%	36%	18%	21%	9%	12%
% of institutions with high school students enrolled in an English course	70%	100%*	88%	98%	83%	98%

* The upper bound for the estimate is 100%; however, at least some institutions do not offer English to high school students.

Table E7: Unduplicated Head Counts of High School Students Enrolled in For-Credit, College-Level English Courses at Two-Year Colleges by US Census Bureau Region, Fall 2015

	Northeast		South		Midwest		West	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Total students enrolled	262,100	288,900	649,100	703,800	357,600	392,100	425,500	469,700
High school students enrolled	18,200	24,000	118,600	135,600	60,300	72,800	47,600	57,200
% of high school students in total English enrollment	6%	9%	17%	21%	15%	20%	10%	13%
% of institutions with high school students enrolled in an English course	86%	100%*	88%	98%	82%	100%*	75%	97%

Nine institutions included in the study are located in US territories; their data are not included in this table.

* The upper bound for the estimate is 100%; however, at least some institutions do not offer English to high school students.

Table E8: Unduplicated Head Counts of High School Students Enrolled in College-Level, For-Credit English Courses at Two-Year Colleges, by Carnegie Classification, Fall 2015

	Career & Technical		Mixed		Transfer		Baccalaureate	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Total students enrolled	207,800	226,400	518,300	563,500	806,500	867,700	167,300	194,300
High school students enrolled	37,900	43,800	79,300	90,000	90,200	105,100	37,300	51,600
% of high school students in total English enrollment	17%	21%	14%	17%	10%	13%	19%	31%
% of institutions with high school students enrolled in an English course	70%	98%	86%	99%	87%	98%	‡	

Three institutions included in the study are not included in the Carnegie universe; their data are not included in this table.

‡ All of the responding institutions in this group have high school students enrolled in for-credit, college-level English courses; it is possible that some of the non-responding institutions do not have high school students enrolled in for-credit, college-level English courses.

Foreign Language at Two-Year Colleges

Table FL1: Unduplicated Head Counts of All Students Enrolled in and Faculty Members Teaching For-Credit, College-Level Foreign Language Courses at Two-Year Colleges, Fall 2015

	Low estimate	High estimate
Students enrolled	298,700	323,100
% of all enrollment	4.3%	4.7%
% of institutions offering Foreign Language	54%	66%
% of enrollment at institutions offering Foreign Language	79%	87%
Faculty members teaching Foreign Language	11,300	12,200
% of all faculty members teaching Foreign Language	3.2%	3.6%
Student-to-faculty ratio	24.5	28.6

Table FL2: Unduplicated Head Counts of All Students Enrolled in and Faculty Members Teaching For-Credit, College-Level Foreign Language Courses at Two-Year Colleges, by Size of Institution, Fall 2015

	Small		Medium		Large	
	Low Estimate	High Estimate	Low Estimate	High Estimate	Low Estimate	High Estimate
Students enrolled	5,750	9,250	97,700	109,700	189,200	210,200
% of all enrollment	0.7%	1.2%	3.5%	3.9%	3.0%	4.9%
% of institutions offering Foreign Language	10%	35%	51%	67%	93%	100%*
% of enrollment at institutions offering Foreign Language	9%	34%	61%	75%	95%	100%*
Faculty members teaching Foreign Language	600	800	5,300	5,750	5,200	5,850
% of all faculty members teaching Foreign Language	2.3%	3.5%	3.2%	3.7%	3.1%	3.7%
Student-to-faculty ratio	7.2	15.4	17.0	20.7	32.3	40.4

* The upper bound for the estimate is 100%; however, at least some students attend an institution where Foreign Language is not offered and at least some institutions do not offer Foreign Language.

Table FL3: Unduplicated Head Counts of All Students Enrolled in and Faculty Members Teaching College-Level, For-Credit Foreign Language Courses at Two-Year Colleges, by US Census Bureau Region, Fall 2015

	Northeast		South		Midwest		West	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Students enrolled	45,300	53,100	67,300	78,900	45,100	56,500	129,500	146,100
% of all enrollment	5.7%	6.6%	2.8%	3.2%	3.3%	4.1%	5.7%	6.5%
% of institutions offering Foreign Language	81%	100%*	35%	52%	64%	92%	73%	93%
% of enrollment at institutions offering Foreign Language	81%	100%*	66%	81%	65%	87%	89%	100%*
Faculty members teaching Foreign Language	1,700	1,950	2,850	3,300	2,100	2,450	4,250	4,850
% of all faculty members teaching Foreign Language	3.2%	4.1%	2.3%	2.8%	2.6%	3.3%	4.2%	5.2%
Student-to-faculty ratio	23.2	31.2	20.4	27.7	18.4	26.9	26.7	34.4

Nine institutions included in the study are located in US territories; their data are not included in this table.

* The upper bound for the estimate is 100%; however, at least some students attend an institution where Foreign Language is not offered since at least some institutions do not offer Foreign Language.

Table FL4: Unduplicated Head Counts of All Students Enrolled in and Faculty Members Teaching College-Level, For-Credit Foreign Language Courses at Two-Year Colleges, by Carnegie Classification, Fall 2015

	Career & Technical		Mixed		Transfer		Baccalaureate	
	Low estimate	High estimate	Low estimate	High estimate	Low estimate	High estimate	Low estimate	High estimate
Students enrolled	18,500	25,100	79,100	93,100	163,900	181,300	26,600	33,800
% of all enrollment	2.2%	3.0%	3.7%	4.3%	5.1%	5.7%	3.9%	5.0%
% of institutions offering Foreign Language	25%	50%	44%	65%	67%	83%	57%	94%
% of enrollment at institutions offering Foreign Language	42%	68%	71%	88%	86%	96%	79%	100%*
Faculty members teaching Foreign Language	1,200	1,450	3,300	3,750	5,450	6,100	950	1,250
% of all faculty members teaching Foreign Language	2.1%	2.8%	2.9%	3.6%	3.5%	4.2%	2.7%	4.1%
Student-to-faculty ratio	12.8	20.9	21.1	28.2	26.9	33.3	21.3	35.6

Three institutions included in the study are not included in the 2015 Carnegie universe; their data are not included in this table.

* The upper bound for the estimate is 100%; however, at least some students attend an institution where Foreign Language is not offered since at least some institutions do not offer Foreign Language.

Table FL5: Unduplicated Head Counts of High School Students Enrolled in For-Credit, College-Level Foreign Language Courses at Two-Year Colleges, Fall 2015

	Low estimate	High estimate
Total students enrolled	298,700	323,100
High school students enrolled	47,700	54,700
% of high school students in total Foreign Language enrollment	15%	18%
% of institutions with high school students enrolled in a Foreign Language class	43%	55%

Table FL6: Unduplicated Head Counts of High School Students Enrolled in For-Credit, College-Level Foreign Language Courses at Two-Year Colleges, by Size of Institution, Fall 2015

	Small		Medium		Large	
	<i>Low Estimate</i>	<i>High Estimate</i>	<i>Low Estimate</i>	<i>High Estimate</i>	<i>Low Estimate</i>	<i>High Estimate</i>
Total students enrolled	5,750	9,250	97,700	109,700	189,200	210,200
High school students enrolled	4,800	7,450	26,600	32,200	14,100	17,200
% of high school students in total Foreign Language enrollment	52%	100%*	24%	33%	7%	9%
% of institutions with high school students enrolled in a Foreign Language class	18%	46%	38%	54%	65%	84%

* The upper bound for the estimate is 100%; however, it is very unlikely that all students taking a for-credit, college-level foreign language course at a small two-year college are high school students.

Table FL7: Unduplicated Head Counts of High School Students Enrolled in For-Credit, College-Level Foreign Language Courses at Two-Year Colleges, by US Census Bureau Region, Fall 2015

	Northeast		South		Midwest		West	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Total students enrolled	45,300	53,100	67,300	78,900	45,100	56,500	129,500	146,100
High school students enrolled	8,900	11,400	12,400	16,000	8,450	11,700	15,500	18,800
% of high school students in total Foreign Language enrollment	17%	25%	16%	24%	15%	26%	11%	15%
% of institutions with high school students enrolled in a Foreign Language class	87%	100%*	38%	56%	30%	55%	47%	73%

Nine institutions included in the study are located in US territories; their data are not included in this table.

* The upper bound for the estimate is 100%; however, at least some institutions do not offer Foreign Language to high school students.

Table FL8: Unduplicated Head Counts of High School Students Enrolled in For-Credit, College-Level Foreign Language Courses at Two-Year Colleges, by Carnegie Classification, Fall 2015

	Career & Technical		Mixed		Transfer		Baccalaureate	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Total students enrolled	18,500	25,100	79,100	93,100	163,900	181,300	26,600	33,800
High school students enrolled	6,250	9,000	15,300	19,500	18,000	22,000	4,700	7,450
% of high school students in total Foreign Language enrollment	25%	49%	16%	25%	10%	13%	14%	28%
% of institutions with high school students enrolled in a Foreign Language class	20%	44%	44%	65%	41%	60%	55%	93%

Three institutions included in the study are not included in the 2015 Carnegie universe; their data are not included in this table.

History at Two-Year Colleges

Table H1: Unduplicated Head Counts of All Students Enrolled in and Faculty Members Teaching For-Credit, College-Level History Courses at Two-Year Colleges, Fall 2015

	Low estimate	High estimate
Students enrolled	698,000	753,600
% of all enrollment	10.1%	11.0%
% of institutions offering History	71%	81%
% of enrollment at institutions offering History	85%	94%
Faculty members teaching History	14,200	14,900
% of all faculty members teaching History	4.0%	4.4%
Student-to-faculty ratio	46.8	53.1

* The upper bound for the estimate is 100%; however, at least some students attend an institution where History is not offered since at least some institutions do not offer History.

Table H2: Unduplicated Head Counts of All Students Enrolled in and Faculty Members Teaching For-Credit, College-Level History Courses at Two-Year Colleges, by Size of Institution, Fall 2015

	Small		Medium		Large	
	Low estimate	High estimate	Low estimate	High estimate	Low estimate	High estimate
Students enrolled	21,200	28,000	259,900	281,400	405,200	456,000
% of all enrollment	8.5%	11.2%	9.3%	10.1%	10.6%	11.9%
% of institutions offering History	35%	65%	84%	94%	92%	100%*
% of enrollment at institutions offering History	37%	67%	78%	90%	93%	100%*
Faculty members teaching History	1,300	1,450	6,950	7,350	5,800	6,350
% of all faculty members teaching History	4.9%	6.5%	4.2%	4.8%	3.4%	4.0%
Student-to-faculty ratio	14.6	21.5	35.4	40.5	63.8	78.6

* The upper bound for the estimate is 100%; however, at least some students attend an institution where History is not offered since at least some institutions do not offer History.

‡ All of the responding institutions in this group offer History; it is possible that some of the non-responding institutions do not offer History.

Table H3: Unduplicated Head Counts of All Students Enrolled in and Faculty Members Teaching For-Credit, College-Level History Courses at Two-Year Colleges, by US Census Bureau Region, Fall 2015

	Northeast		South		Midwest		West	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Students enrolled	88,300	103,000	306,200	341,200	104,300	131,600	173,100	203,100
% of all enrollment	11.0%	12.9%	12.6%	14.0%	7.5%	9.5%	7.7%	9.0%
% of institutions offering History	81%	100%*	66%	81%	55%	78%	75%	94%
% of enrollment at institutions offering History	87%	100%*	84%	95%	73%	92%	86%	100%*
Faculty members teaching History	2,050	2,300	5,600	6,000	2,550	2,900	3,650	4,050
% of all faculty members teaching History	4.0%	4.9%	4.5%	5.1%	3.2%	3.9%	3.6%	4.3%
Student-to-faculty ratio	38.4	50.2	51.0	60.9	36.0	51.6	42.7	55.6

Nine institutions included in the study are located in US territories; their data are not included in this table.

* The upper bound for the estimate is 100%; however, at least some students attend an institution where History is not offered and at least some institutions do not offer History.

Table H4: Unduplicated Head Counts of All Students Enrolled in and Faculty Members Teaching For-Credit, College-Level History Courses at Two-Year Colleges, by Carnegie Classification, Fall 2015

	Career & Technical		Mixed		Transfer		Baccalaureate	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Students enrolled	59,600	70,200	197,100	228,300	362,000	401,100	55,300	77,200
% of all enrollment	7.0%	8.3%	9.2%	10.7%	11.3%	12.5%	8.1%	11.3%
% of institutions offering History	52%	77%	64%	87%	78%	91%	64%	98%
% of enrollment at institutions offering History	65%	87%	82%	96%	89%	98%	78%	100%*
Faculty members teaching History	2,150	2,350	4,250	4,650	6,350	6,850	1,150	1,400
% of all faculty members teaching History	3.7%	4.6%	3.8%	4.4%	4.1%	4.7%	3.2%	4.7%
Student-to-faculty ratio	25.4	32.7	42.4	53.7	52.8	63.2	39.5	67.1

Three institutions included in the study are not included in the 2015 Carnegie universe; their data are not included in this table.

* The upper bound for the estimate is 100%; however, at least some students attend an institution where History is not offered and at least some institutions do not offer History.

‡ All of the responding institutions in this group offer History; it is possible that some of the non-responding institutions do not offer History.

Table H5: Unduplicated Head Counts of High School Students Enrolled in For-Credit, College-Level History Courses at Two-Year Colleges, Fall 2015

	Low estimate	High estimate
Total students enrolled	698,000	753,600
High school students enrolled	109,100	122,000
% of high school students in total History enrollment	14%	17%
% of institutions with high school students enrolled in a History course	69%	79%

Table H6: Unduplicated Head Counts of High School Students Enrolled in For-Credit, College-Level History Courses at Two-Year Colleges, by Size of Institution, Fall 2015

	Small		Medium		Large	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Total students enrolled	21,200	28,000	259,900	281,400	405,200	456,000
High school students enrolled	9,950	13,100	55,100	61,800	40,300	50,900
% of high school students in total History enrollment	36%	62%	20%	24%	9%	13%
% of institutions with high school students enrolled in a History course	53%	81%	67%	81%	73%	90%

* The upper bound for the estimate is 100%; however, at least some institutions do not offer History to high school students.

Table H7: Unduplicated Head Counts of High School Students Enrolled in For-Credit, College-Level History Courses at Two-Year Colleges, by US Census Bureau Region, Fall 2015

	Northeast		South		Midwest		West	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Total students enrolled	88,300	103,000	306,200	341,200	104,300	131,600	173,100	203,100
High school students enrolled	5,900	8,800	60,400	69,900	17,100	23,300	19,600	24,900
% of high school students in total History enrollment	6%	10%	18%	23%	13%	22%	10%	14%
% of institutions with high school students enrolled in a History course	48%	80%	79%	92%	57%	80%	54%	80%

Nine institutions included in the study are located in US territories; their data are not included in this table.

Table H8: Unduplicated Head Counts of High School Students Enrolled in College-Level, For-Credit History Courses at Two-Year Colleges, by Carnegie Classification, Fall 2015

	Career & Technical		Mixed		Transfer		Baccalaureate	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Total students enrolled	59,600	70,200	197,100	228,300	362,000	401,100	55,300	77,200
High school students enrolled	16,200	20,000	34,500	42,200	41,700	49,000	10,300	16,600
% of high school students in total History enrollment	23%	34%	15%	21%	10%	14%	13%	30%
% of institutions with high school students enrolled in a History course	51%	76%	70%	87%	67%	83%	60%	96%

Three institutions included in the study are not included in the Carnegie universe; their data are not included in this table.

‡ All of the responding institutions in this group have high school students enrolled in for-credit, college-level History courses; it is possible that some of the non-responding institutions do not have high school students enrolled in for-credit, college-level History courses.

Philosophy at Two-Year Colleges

Table P1: Unduplicated Head Counts of All Students Enrolled in and Faculty Members Teaching For-Credit, College-Level Philosophy Courses at Two-Year Colleges, Fall 2015

	Low estimate	High estimate
Students enrolled	255,500	274,700
% of all enrollment	3.7%	4.0%
% of institutions offering Philosophy	85%	92%
% of enrollment at institutions offering Philosophy	92%	98%
Faculty members teaching Philosophy	4,950	5,250
% of all faculty members teaching Philosophy	1.4%	1.5%
Student-to-faculty ratio	48.7	55.5

Table P2: Unduplicated Head Counts of All Students Enrolled in and Faculty Members Teaching For-Credit, College-Level Philosophy Courses at Two-Year Colleges, by Size of Institution, Fall 2015

	Small		Medium		Large	
	<i>Low Estimate</i>	<i>High Estimate</i>	<i>Low Estimate</i>	<i>High Estimate</i>	<i>Low Estimate</i>	<i>High Estimate</i>
Students enrolled	12,700	16,900	95,600	105,500	141,800	157,700
% of all enrollment	5.1%	6.8%	3.4%	3.8%	4.1%	5.1%
% of institutions offering Philosophy	64%	89%	84%	94%	95%	100%*
% of enrollment at institutions offering Philosophy	67%	91%	88%	96%	96%	100%*
Faculty members teaching Philosophy	500	600	2,300	2,550	2,050	2,200
% of all faculty members teaching Philosophy	1.9%	2.7%	1.4%	1.6%	1.2%	1.4%
Student-to-faculty ratio	21.2	33.8	37.5	45.9	64.5	76.9

* The upper bound for the estimate is 100%; however, at least some students attend an institution where Philosophy is not offered and at least some institutions do not offer Philosophy.

Table P3: Unduplicated Head Counts of All Students Enrolled in and Faculty Members Teaching College-Level, For-Credit Philosophy Courses at Two-Year Colleges, by US Census Bureau Region, Fall 2015

	Northeast		South		Midwest		West	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Students enrolled	28,200	34,800	82,400	93,300	69,900	79,500	65,100	75,700
% of all enrollment	3.5%	4.3%	3.4%	3.8%	5.0%	5.7%	2.9%	3.4%
% of institutions offering Philosophy	90%	100%*	75%	88%	89%	100%*	81%	98%
% of enrollment at institutions offering Philosophy	92%	100%*	87%	97%	94%	100%*	91%	100%*
Faculty members teaching Philosophy	600	700	1,650	1,850	1,350	1,500	1,200	1,350
% of all faculty members teaching Philosophy	1.1%	1.5%	1.3%	1.6%	1.6%	2.0%	1.2%	1.4%
Student-to-faculty ratio	40.3	58.0	44.5	56.5	46.6	58.9	48.2	63.1

Nine institutions included in the study are located in US territories; their data are not included in this table.

* The upper bound for the estimate is 100%; however, at least some students attend an institution where Philosophy is not offered since at least some institutions do not offer Philosophy.

Table P4: Unduplicated Head Counts of All Students Enrolled in and Faculty Members Teaching College-Level, For-Credit Philosophy Courses at Two-Year Colleges, by Carnegie Classification, Fall 2015

	Career & Technical		Mixed		Transfer		Baccalaureate	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Students enrolled	29,000	35,100	79,300	88,900	113,800	127,000	24,300	32,300
% of all enrollment	3.4%	4.1%	3.7%	4.2%	3.6%	4.0%	3.6%	4.7%
% of institutions offering Philosophy	70%	91%	81%	95%	87%	97%	90%	100%*
% of enrollment at institutions offering Philosophy	80%	96%	90%	99%	94%	100%*	93%	100%*
Faculty members teaching Philosophy	800	950	1,550	1,750	2,000	2,150	450	550
% of all faculty members teaching Philosophy	1.4%	1.8%	1.4%	1.7%	1.3%	1.5%	1.2%	1.8%
Student-to-faculty ratio	30.5	43.9	45.3	57.4	52.9	63.5	44.2	71.8

Three institutions included in the study are not included in the 2015 Carnegie universe; their data are not included in this table.

* The upper bound for the estimate is 100%; however, at least some students attend an institution where Philosophy is not offered since at least some institutions do not offer Philosophy.

Table P5: Unduplicated Head Counts of High School Students Enrolled in For-Credit, College-Level Philosophy Courses at Two-Year Colleges, Fall 2015

	Low estimate	High estimate
Total students enrolled	255,500	274,700
High school students enrolled	11,500	17,400
% of high school students in total Philosophy enrollment	4%	7%
% of institutions with high school students enrolled in a Philosophy class	32%	47%

Table P6: Unduplicated Head Counts of High School Students Enrolled in For-Credit, College-Level Philosophy Courses at Two-Year Colleges, by Size of Institution, Fall 2015

	Small		Medium		Large	
	<i>Low Estimate</i>	<i>High Estimate</i>	<i>Low Estimate</i>	<i>High Estimate</i>	<i>Low Estimate</i>	<i>High Estimate</i>
Total students enrolled	12,700	16,900	95,600	105,500	141,800	157,700
High school students enrolled	175	2,300	5,800	11,000	3,850	5,750
% of high school students in total Philosophy enrollment	1%	18%	6%	11%	2%	4%
% of institutions with high school students enrolled in a Philosophy class	1%	33%	25%	44%	64%	85%

Table P7: Unduplicated Head Counts of High School Students Enrolled in For-Credit, College-Level Philosophy Courses at Two-Year Colleges, by US Census Bureau Region, Fall 2015

	Northeast		South		Midwest		West	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Total students enrolled	28,200	34,800	82,400	93,300	69,900	79,500	65,100	75,700
High school students enrolled	150	1,100	4,650	8,450	2,100	5,250	2,000	4,950
% of high school students in total Philosophy enrollment	<1%	4%	5%	10%	3%	8%	3%	8%
% of institutions with high school students enrolled in a Philosophy class	12%	50%	29%	50%	22%	56%	29%	61%

Nine institutions included in the study are located in US territories; their data are not included in this table.

Table P8: Unduplicated Head Counts of High School Students Enrolled in For-Credit, College-Level Philosophy Courses at Two-Year Colleges, by Carnegie Classification, Fall 2015

	Career & Technical		Mixed		Transfer		Baccalaureate	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Total students enrolled	29,000	35,100	79,300	88,900	113,800	127,000	24,300	32,300
High school students enrolled	1,050	4,000	3,000	6,650	3,550	6,750	1,200	2,700
% of high school students in total Philosophy enrollment	3%	14%	3%	8%	3%	6%	4%	11%
% of institutions with high school students enrolled in a Philosophy class	10%	43%	29%	53%	35%	57%	18%	72%

Three institutions included in the study are not included in the 2015 Carnegie universe; their data are not included in this table.

Other Humanities at Two-Year Colleges

Table OH1: Unduplicated Head Counts of All Students Enrolled in and Faculty Members Teaching For-Credit, College-Level (Other) Humanities Courses* at Two-Year Colleges, Fall 2015

	Low estimate	High estimate
Students enrolled	391,900	449,500
% of all enrollment	5.7%	6.5%
% of institutions offering Other Humanities*	67%	78%
% of enrollment at institutions offering Other Humanities*	67%	80%
Faculty members teaching Other Humanities*	18,600	20,900
% of all faculty members teaching Other Humanities*	5.3%	6.2%
Student-to-faculty ratio	18.8	24.2

* Humanities courses in disciplines other than English, foreign language, history and philosophy

Table OH2: Unduplicated Head Counts of All Students Enrolled in and Faculty Members Teaching For-Credit, College-Level (Other) Humanities Courses* at Two-Year Colleges, by Size of Institution, Fall 2015

	Small		Medium		Large	
	<i>Low Estimate</i>	<i>High Estimate</i>	<i>Low Estimate</i>	<i>High Estimate</i>	<i>Low Estimate</i>	<i>High Estimate</i>
Students enrolled	26,900	43,600	187,900	229,600	158,800	194,600
% of all enrollment	10.8%	17.5%	6.7%	8.2%	4.1%	5.1%
% of institutions offering Other Humanities*	56%	84%	69%	82%	56%	77%
% of enrollment at institutions offering Other Humanities*	56%	83%	72%	85%	59%	80%
Faculty members teaching Other Humanities*	3,150	4,100	11,200	13,000	3,450	4,650
% of all faculty members teaching Other Humanities*	11.9%	18.1%	6.9%	8.4%	2.0%	2.9%
Student-to-faculty ratio	6.6	13.8	14.5	20.5	34.2	56.4

* Humanities courses in disciplines other than English, foreign language, history and philosophy

Table OH3: Unduplicated Head Counts of All Students Enrolled in and Faculty Members Teaching College-Level, For-Credit (Other) Humanities Courses⁺ at Two-Year Colleges, by US Census Bureau Region, Fall 2015

	Northeast		South		Midwest		West	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Students enrolled	67,600	94,200	121,200	152,700	86,700	117,700	86,200	111,600
% of all enrollment	8.4%	11.8%	5.0%	6.3%	6.3%	8.5%	3.8%	4.9%
% of institutions offering Other Humanities⁺	68%	94%	55%	72%	66%	87%	66%	89%
% of enrollment at institutions offering Other Humanities⁺	61%	90%	66%	82%	64%	86%	58%	83%
Faculty members teaching Other Humanities⁺	2,600	3,450	5,300	6,450	4,550	5,900	4,800	6,000
% of all faculty members teaching Other Humanities⁺	5.0%	7.3%	4.2%	5.5%	5.6%	8.0%	4.7%	6.4%
Student-to-faculty ratio	19.6	36.2	18.8	28.8	14.7	25.9	14.4	23.3

⁺ Humanities courses in disciplines other than English, foreign language, history and philosophy
 Nine institutions included in the study are located in US territories; their data are not included in this table.

Table OH4: Unduplicated Head Counts of All Students Enrolled in and Faculty Members Teaching College-Level, For-Credit (Other) Humanities Courses⁺ at Two-Year Colleges, by Carnegie Classification, Fall 2015

	Career & Technical		Mixed		Transfer		Baccalaureate	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Students enrolled	45,600	67,200	102,800	131,700	160,500	197,700	54,800	79,600
% of all enrollment	5.4%	7.9%	4.8%	6.1%	5.0%	6.2%	8.0%	11.7%
% of institutions offering Other Humanities⁺	57%	81%	61%	80%	67%	83%	60%	96%
% of enrollment at institutions offering Other Humanities⁺	56%	80%	64%	83%	64%	81%	63%	98%
Faculty members teaching Other Humanities⁺	3,400	4,300	5,300	6,600	7,150	8,550	1,600	2,550
% of all faculty members teaching Other Humanities⁺	5.9%	8.3%	4.7%	6.3%	4.6%	5.9%	4.8%	8.5%
Student-to-faculty ratio	10.6	19.8	15.6	24.8	18.8	27.7	21.5	49.8

⁺ Humanities courses in disciplines other than English, foreign language, history and philosophy

Three institutions included in the study are not included in the 2015 Carnegie universe; their data are not included in this table.

Table OH5: Unduplicated Head Counts of High School Students Enrolled in For-Credit, College-Level (Other) Humanities Courses⁺ at Two-Year Colleges, Fall 2015

	Low estimate	High estimate
Total students enrolled	391,900	449,500
High school students enrolled	14,400	18,100
% of high school students in total Other Humanities⁺ enrollment	3%	5%
% of institutions with high school students enrolled in an Other Humanities⁺ class	10%	19%

⁺ Humanities courses in disciplines other than English, foreign language, history and philosophy

Table OH6: Unduplicated Head Counts of High School Students Enrolled in For-Credit, College-Level (Other) Humanities Courses⁺ at Two-Year Colleges, by Size of Institution, Fall 2015

	Small		Medium		Large	
	<i>Low Estimate</i>	<i>High Estimate</i>	<i>Low Estimate</i>	<i>High Estimate</i>	<i>Low Estimate</i>	<i>High Estimate</i>
Total students enrolled	26,900	43,600	187,900	229,600	158,800	194,600
High school students enrolled	900	1,900	6,500	8,900	5,800	8,500
% of high school students in total Other Humanities⁺ enrollment	2%	7%	3%	5%	3%	5%
% of institutions with high school students enrolled in an Other Humanities⁺ class	0%*	12%	7%	18%	19%	39%

⁺ Humanities courses in disciplines other than English, foreign language, history and philosophy

* The lower bound for the estimate is 0%; however, at least some students taking a for-credit, college-level Other Humanities course at a small two-year college are high school students.

Table OH7: Unduplicated Head Counts of High School Students Enrolled in For-Credit, College-Level (Other) Humanities Courses* at Two-Year Colleges, by US Census Bureau Region, Fall 2015

	Northeast		South		Midwest		West	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Total students enrolled	67,600	94,200	121,200	152,700	86,700	117,700	86,200	111,600
High school students enrolled	1,950	3,600	4,050	6,000	4,450	6,450	2,150	3,950
% of high school students in total Other Humanities+ enrollment	2%	5%	3%	5%	4%	7%	2%	5%
% of institutions with high school students enrolled in an Other Humanities+ classes	4%	29%	9%	21%	6%	25%	3%	21%

* Humanities courses in disciplines other than English, foreign language, history and philosophy

Nine institutions included in the study are located in US territories; their data are not included in this table.

* The upper bound for the estimate is 100%; however, at least some institutions do not offer Philosophy to high school students.

Table OH8: Unduplicated Head Counts of High School Students Enrolled in For-Credit, College-Level (Other) Humanities Courses⁺ at Two-Year Colleges, by Carnegie Classification, Fall 2015

	Career & Technical		Mixed		Transfer		Baccalaureate	
	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>	<i>Low estimate</i>	<i>High estimate</i>
Total students enrolled	45,600	67,200	102,800	131,700	160,500	197,700	54,800	79,600
High school students enrolled	1,350	2,150	2,450	3,850	6,650	9,300	2,350	4,400
% of high school students in total Other Humanities⁺ enrollment	2%	5%	2%	4%	3%	6%	5%	8%
% of institutions with high school students enrolled in an Other Humanities⁺ class	3%	19%	4%	18%	11%	25%	7%	45%

⁺ Humanities courses in disciplines other than English, foreign language, history and philosophy
Three institutions included in the study are not included in the 2015 Carnegie universe; their data are not included in this table.

Attachment A: Selection and Recruitment of Schools Included in the Study

Staff members from the American Association of Arts and Sciences (AAAS) identified 990 two-year institutions using the Carnegie classifications indicated below in the Integrated Postsecondary Education Data System (IPEDS) from the US Department of Education for the 2014–15 academic year. Given the relatively small number of institutions, AAAS staff, in consultation with the contractor, decided to survey the entire population. The Carnegie classifications included:

- Associate's—Public Rural-serving Small
- Associate's—Public Rural-serving Medium
- Associate's—Public Rural-serving Large
- Associate's—Public Suburban-serving Single Campus
- Associate's—Public Suburban-serving Multicampus
- Associate's—Public Urban-serving Single Campus
- Associate's—Public Urban-serving Multicampus
- Associate's—Public Special Use
- Associate's—Public 2-year colleges under 4-year universities
- Associate's—Public 4-year Primarily Associate's

Data Collection

AAAS staff identified the Chief Administrator for each of institutions drawn from IPEDS. On February 28, 2017, the contractor sent letters to Chief Administrator at each of the 990 institutions describing the study and asking the Chief Administrator to use a web form or return an enclosed postcard to provide the name of the Institutional Research (IR) officer for their institution. The letter was signed by Jonathan F. Fanton, President of AAS, and by Sandra L. Kurtinitis, the President of the Community College of Baltimore County and representing the Community College Humanities Association. On March 17, 2017, we sent out the first request for data to the IR officers that had been identified by their Chief Administrators. If we had no IR contact information, we sent the request to the Chief Administrator. We sent reminders out to non-respondents on April 13, May 4, and May 22. The May 22 message notified non-respondents that the deadline had been extended to June 16.

During the mailings, some institutions reported that they were not a two-year college, and we discovered others had been closed or merged with sister institutions. We examined websites for non-responding to determine their status—open or closed; if open, we check eligibility. In the end, we included 966 institutions in the universe of two-year colleges.

Response Rates

Overall, we had a 29% response rate with 276 of the 966 schools responding. There were statistically significant differences in response rate by size of school and by Census Bureau region. Since both the number of students and the state were included as covariates in the multiple imputation model used to estimate missing data, these differences should not affect the overall estimates. There was no statistically significant difference in response rate by Carnegie classification. These response rates are shown in Tables A1, A2, and A3 (following page).

Table A1: Response Rate by Size of School

	Small	Medium	Large
Number of institutions	193	566	207
Number of respondents	43	154	79
Response rate	22%	27%	38%

Table A2: Response Rate by Census Bureau Regions*

	Northeast	South	Midwest	West
Number of institutions	114	365	232	246
Number of respondents	35	125	61	53
Response rate	31%	34%	26%	22%

* There are nine institutions in US territories; their data are not included in this table.

Table A3: Response Rate by Carnegie Classification

	Career & Technical	Mixed	Transfer	Baccalaureate
Number of institutions	218	316	355	74
Number of respondents	57	87	112	20
Response rate	26%	28%	32%	27%

* Three institutions included in the study are not included in the 2015 Carnegie universe; their data are not included in this table.

Attachment B: US Census Bureau Regions & Institutions Not in Groups

The US Census Bureau has defined four regions: Northeast, South, Midwest, and West. The states included in each region are shown below.

Northeast

- Connecticut
- Maine
- Massachusetts
- New Hampshire
- New Jersey
- New York
- Pennsylvania
- Rhode Island
- Vermont

South

- Alabama
- Arkansas
- Delaware
- District of Columbia
- Florida
- Georgia
- Kentucky
- Louisiana
- Maryland
- Mississippi
- North Carolina
- Oklahoma
- South Carolina
- Tennessee
- Texas
- Virginia
- West Virginia

Midwest

- Illinois
- Indiana
- Iowa
- Kansas
- Michigan
- Minnesota
- Missouri
- Nebraska
- North Dakota
- Ohio
- South Dakota
- Wisconsin

West

- Alaska
- Arizona
- California
- Colorado
- Hawaii
- Idaho
- Montana
- Nevada
- New Mexico
- Oregon
- Utah
- Washington
- Wyoming

Schools not located in the US Census Bureau regions are

- The College of Micronesia-FSM in Federated States of Micronesia
- Guam Community College in Guam
- American Samoa Community College in American Samoa
- Palau Community College in Palau
- Instituto Tecnológico de Puerto Rico-Guayama, Puerto Rico
- Instituto Tecnológico de Puerto Rico-Recinto de San Juan in Puerto Rico
- College of the Marshall Islands in Marshall Islands
- Instituto Tecnológico de Puerto Rico-Recinto de Ponce in Puerto Rico
- Instituto Tecnológico de Puerto Rico-Recinto de Manatí in Puerto Rico

Schools not included in the Carnegie universe are

- Mountainland Applied Technology College in Utah
- Davis Applied Technology College(ATC) in Utah
- Ogden-Weber Applied Technology College in Utah

Attachment C: Multiple Imputation

At the request of AAAS, we used multiple imputation to estimate missing data. Some responding schools left some of the requested information blank, and other schools did not respond at all. We used the R implementation of Multivariate Imputation with Chained Equations (MICE). The original goal was to impute both duplicated and unduplicated head counts for courses in English, foreign languages, history, philosophy, other humanities, and total humanities. In addition, we were to impute the number of faculty members teaching each of these courses, and we were to provide breakdowns for the enrollments by race/ethnicity, sex, and full-time or part-time status.

We used institutional-level data from the Integrated Postsecondary Education Data System (IPEDS) as predictors in the imputations since those data are available for (almost)¹⁵ every institution, not just the responding institutions. We also used the survey data itself as predictors for the imputation. For example, the number of students enrolled in English courses helped predict the number of faculty members teaching English courses. We very quickly ran into issues with multicollinearity in our MICE analyses due to the high correlations among variables, both the IPEDS data and the survey responses.

We attempted several methods to address the multicollinearity issues. First we tried restating the IPEDS variables as ratios of total enrollment at each school. This did not solve the problem. Then we tried restating the IPEDS variables by normalizing each variable. This also did not solve the problem. We then ran a factor analysis in SPSS to reduce the number of IPEDS variables in the MICE implementation while retaining the relevant information; this removed many of the highly correlated predictors. Ultimately, twenty of our IPEDS variables were reduced to three factors.

Factor Analysis for IPEDS Data

We used twenty IPEDS variables to characterize each institution. Complete data for all 966 institutions was available for eight of the twenty variables:

- Sector of institution
- Level of institution
- Grand total, all students, undergraduate total
- Total men, all students, undergraduate total
- Total women, all students, undergraduate total
- Hispanic total, all students, undergraduate total
- White total, all students, undergraduate total
- Two or more races total, all students, undergraduate total

We used imputation by linear interpolation in SPSS to impute missing values for the remaining twelve variables:

- Total operating and nonoperating revenues
- Grand total, age under 18, all students total
- Total, age under 18, all students total

¹⁵ Some data for some of the institutions was missing. Missing IPEDS data was imputed in SPSS using linear interpolation.

- Total women, age under 18, all students total
- Part-time total, age under 18, all students total
- Part-time men, age under 18, all students total
- Full-time total, all students, undergraduate total
- Full-time men, all students, undergraduate total
- Full-time women, all students, undergraduate total
- Part-time total, all students, undergraduate total
- Part-time men, all students, undergraduate total
- Part-time women, all students, undergraduate total

Three factors were identified. The variables that grouped into each factor are:

- Factor 1 (General characteristics)
 - Grand total, all students, undergraduate total
 - Total men, all students, undergraduate total
 - Total women, all students, undergraduate total
 - Hispanic total, all students, undergraduate total
 - White total, all students, undergraduate total
 - Total operating and nonoperating revenues
 - Full-time total, all students, undergraduate total
 - Full-time men, all students, undergraduate total
 - Full-time women, all students, undergraduate total
 - Part-time total, all students, undergraduate total
 - Part-time men, all students, undergraduate total
 - Part-time women, all students, undergraduate total
- Factor 2 (Age profile)
 - Grand total, age under 18, all students total
 - Total, age under 18, all students total
 - Total women, age under 18, all students total
 - Part-time total, age under 18, all students total
 - Part-time men, age under 18, all students total
- Factor 3 (Sector & Level)
 - Sector of institution
 - Level of institution

We then tested each factor to see if there were any statistically significant differences between respondents and non-respondents. We did find statistically significant differences for Factor 1, so we divided the institutions into six different groups based on the Factor 1 score. After doing this, there were no significant differences between respondents and non-respondents except for group 6. Since we are using multiple imputation, we did not weight the institutions. The total number of institutions and total number of responding institutions are shown in Table C1 (following page).

Table C1: Factor 1 Groups

Group	Total Number of Institutions	Number of Responding Institutions	Response Rate
1	778	205	26%
2	43	18	42%
3	38	9	24%
4	27	9	33%
5	39	14	36%
6	41	21	51%

Group 6 has the largest variation in Factor 1 scores and consists of large institutions. Note that we had responses from over half of the institutions in group 6.

Preprocessing the Survey Data

Not only did the IPEDS variables lead to issues with multicollinearity, so did the survey responses. We tried scaling the items to the total institutional enrollment (from IPEDS), and we tried normalizing the values for a given variable. Neither solved the issue. So, we had to omit the duplicated head counts and the race and sex data in order to get the imputation models to run.¹⁶

After omitting these variables, we still had to normalize the values for each variable to address issues of multicollinearity that persisted. We used the equation below to normalize each variable:

$$NV_{ki} = \frac{v_{ki} - \bar{x}_k}{s_k}$$

Where NV_{ki} indicates the normalized value for the k^{th} variable for the i^{th} institution, V_{ki} indicates the raw value for the k^{th} variable for the i^{th} institution, \bar{x}_k indicates the mean for the k^{th} variable, and s_k indicates the standard deviation for the k^{th} variable.

MICE

We used the MICE (Multivariate Imputation by Chained Equations) implementation of multiple imputation in R.¹⁷ MICE requires a prediction matrix indicating relationships among variables. To determine the best prediction matrix, we used a subset of the full data set. The subset included only responding institutions with some of the known values omitted. We then tested to see which prediction matrix resulted in the most accurate predictions. We could measure accuracy since we knew the value from the responding institution. We set the maximum number of iterations per imputation to 100 and the number of imputations to 30. For groups 1, 3, and 4,

¹⁶ There were other issues with the unduplicated and duplicated head counts which we address in Appendix E.

¹⁷ See S. van Buuren and K. Groothuis-Oudshoorn, "Mice: Multivariate Imputation by Chained Equations in R," *Journal of Statistical Software* 45, no. 3 (December 2011): 1–67.

we set donors = 3. For the other groups (2, 5, and 6), we set donors = 5¹⁸. When we had finalized the imputations, we had to do some postprocessing of the resulting data sets.

Postprocessing the Imputations

Since we had normalized all the variables, we had to scale them back to the correct units. We used the equation below to scale each variable:

$$v_{ki} = s_k * NV_{ki} + \bar{x}_k$$

Where V_{ki} indicates the re-scaled (raw) value for the k^{th} variable for the i^{th} institution,
 s_k indicates the standard deviation for the k^{th} variable,
 NV_{ki} indicates the normalized value for the k^{th} variable for the i^{th} institution,
 and
 \bar{x}_k indicates the mean for the k^{th} variable.

After scaling all the data back to the correct units, we had 30 different entries for each institution. For responding institutions, the data in each entry was the same.¹⁹ Some of the re-scaled values were quite small, so we then set a minimum value for each variable. If the re-scaled value was less than the minimum, it was set to zero. The minimum values we used are:

- For unduplicated headcount
 - English—15
 - Foreign Language—10
 - History—10
 - Philosophy—5
 - Other—5
- For number of faculty members
 - English—2
 - All other—1
- For high school students enrolled
 - If the unduplicated enrollment is > 0, the minimum is 1.
 - If the unduplicated enrollment is 0, the number of high school students enrolled is set to 0.

One of the goals of the study was to determine what proportion of institutions offered courses or had high school students enrolled in courses in each discipline. For some institutions, the thirty different entries for each institution would have some instances of no students enrolled and some instances with students enrolled in courses in a discipline. In those cases, we examined the number of students enrolled and the number of faculty members. After some testing using the reduced data set (with only respondents), we determined that the following heuristic modeled whether or not an institution offered courses in a discipline very well.

If either the unduplicated headcount or the number of faculty members was 0 in more than 90% of the imputations (28, 29, or 30 instances of 0 students or 0 faculty members), we set “not offered” to “true.” If neither of these resulted in “not offered” being set to “true,” we set “not

¹⁸ A “donor” in this context is an institution with known data which is “similar” to the institution with missing data. We restricted the number of donors for the groups with the lower response rates.

¹⁹ If a responding institution omitted some answers, those values vary across the 30 entries.

offered” to “true” if the sum of the number of cases of 0 enrollment and 0 faculty members was 40 or more.

An alternate heuristic was considered. If either the unduplicated headcount or the number of faculty members was 0 in more than 70% of the imputations (22 or more instances of 0 students or 0 faculty members), we set “not offered” to “true.” If neither of these resulted in “not offered” being set to “true,” we set “not offered” to “true” if the sum of the number of cases of 0 enrollment and 0 faculty members was 34 or more. The differences in enrollment estimates using the alternate heuristic are shown in Table C2.

Table C2: Differences in Unduplicated Enrollment and Proportion of Schools Offering Courses Using Alternate Heuristic

Discipline	Difference in Estimate	Difference as % of Midpoint of Estimate	Alternate Estimated Range for Proportion of Schools Offering Courses in Discipline
English	13,500 lower	<1%	88.1% to 94.7%
Foreign Languages	31,200 lower	10%	35.6% to 47.2%
History	51,800 lower	7%	52.4% to 64.0%
Philosophy	6,000 lower	2%	74.0% to 83.6%
Other Humanities	73,700 lower	18%	35.0% to 46.6%

Only in the case of Other Humanities would the alternate heuristic have changed the enrollment estimates by more than 10%.

Calculating the Final Estimates

After the post-processing, the estimates for each variable for each institution from each of the 30 imputations were combined into one final data set which consists of a mean and variance for each of the variables. Data from respondents had zero variance. We then summed the means and the variances to get a combined mean and variance for each variable. The final estimates are rounded to the nearest hundred for numbers larger than 9,999 and to the nearest 50 for smaller numbers. The low and high estimates are the lower and upper bounds for a 95% confidence interval:

$$\bar{x}_k \pm 1.96 * s_k$$

Where \bar{x}_k indicates the mean for the k^{th} variable and s_k indicates the standard deviation for the k^{th} variable.

The mean and the standard deviation for each variable were calculated as follows.

$$\bar{x}_k = \sum \bar{x}_{ki}$$

$$\text{and } \bar{x}_{ki} = \sum x_{kij} / n$$

Where \bar{x}_{ki} indicates the mean for the k^{th} variable at the i^{th} institution,
 x_{kij} indicates the value for the k^{th} variable at the i^{th} institution on the j^{th} imputation (we used only the non-zero values of x_{kij}), and
 n indicates the number of non-zero values of x_{kij} .

$$s_k = \sqrt{\sum s_{ki}^2}$$

$$\text{and } s_{ki}^2 = \frac{\sum (x_{kij} - \bar{x}_{ki})^2}{(n - 1)}$$

Where s_{ki}^2 indicates the variance for the k th variable at the i th institution,
 x_{kij} indicates the value for the k th variable at the i th institution on the j th
imputation; note that we used only the non-zero values of x_{kij} ,
 \bar{x}_{ki} indicates the mean for the k th variable at the i th institution
 n indicates the number of non-zero values of x_{kij} .

The lower and high estimates for the proportion of institutions and proportion of students are the lower and upper bounds for a 95% confidence interval:

$$\hat{p}_k \pm 1.96 * \sqrt{\hat{p}_k * (1 - \hat{p}_k) / n_k}$$

Where \hat{p}_k indicates the proportion for the k th variable and
 n_k indicates the number of responses for the k th variable.

The proportion of interest is calculated as

$$\hat{p}_k = \frac{\sum L_{ki} * v_{ki}}{\sum v_{ki}}$$

Where L_{ki} is a binary variable = 1 if the course is offered by the i th institution and 0 otherwise and

v_{ki} is the variable of interest.

Note that $v_{ki} = 1$ in the case of proportion of institutions and
 v_{ki} is the total enrollment in the case of proportion of students.

Enrollment in Any Humanities Course

When we checked the responses, we found that some respondents indicated a total enrollment in any humanities course that was *less* than the maximum enrollment in one of the individual courses. Since that is not possible, those data were not used. In 5,875 of our 28,980 (or 20.3% of the imputations), the imputed enrollment in any humanities course was less than the maximum imputed enrollment in one of the five disciplinary courses. In an additional 5,321 imputations (or 18.4%), the total unduplicated enrollment in all humanities courses exceeded the total of the enrollments in all individual humanities courses. Since almost four imputations in ten did not converge for this variable, we used an alternate way to estimate the total unduplicated enrollment in any humanities course.

We took the ratio between the total enrollment in any humanities course and the maximum of enrollment in (English, foreign languages, history, philosophy, and other humanities). After removing the institutions referenced previously, these ranged from a minimum of 1 to a maximum of 2.86. The median ratio was 1.525, and the inner quartile range (IQR) was 0.316. We used (lower quartile—1.5 * IQR) and (upper quartile + 1.5 * IQR) to set bounds for outliers. We removed additional institutions with ratios that fell outside the bounds for outliers. Using the remaining 171 responding schools, we determined that the average ratio was 1.539819. We used 1.539819 * the maximum enrollment in (English, foreign languages, history, philosophy,

and other humanities) as our estimate for total enrollment in all humanities courses for each institution.

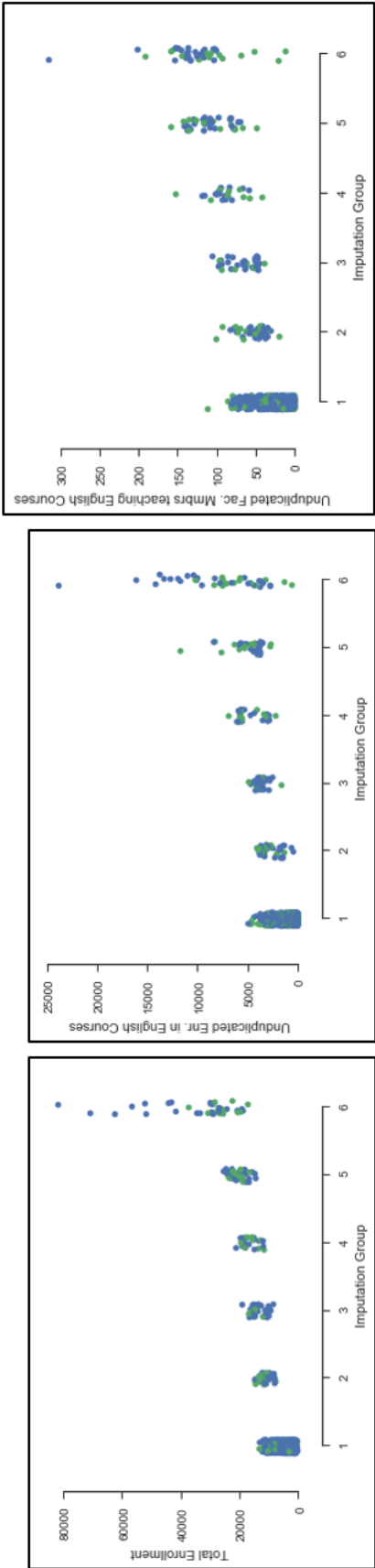
High School Students Enrolled in at Least One Humanities Course

Much like the confusion with the “enrollment in any humanities course,” responses were not consistent for high school students enrolled in at least one humanities course. In 8,971 of our 28,980 imputations (31.0%), the imputed number of high school students enrolled was less than the maximum imputed enrollment in a disciplinary course. In an additional 19,891 imputations (68.6%), the total unduplicated enrollment in all humanities courses exceeded the total of all the enrollments in the disciplinary courses. Since almost none of the imputations converged for this variable, we used the maximum disciplinary enrollment as the enrollment in any humanities course. Therefore, this is a conservative estimate of the number of high school students enrolled in humanities courses at two-year colleges.

The Results

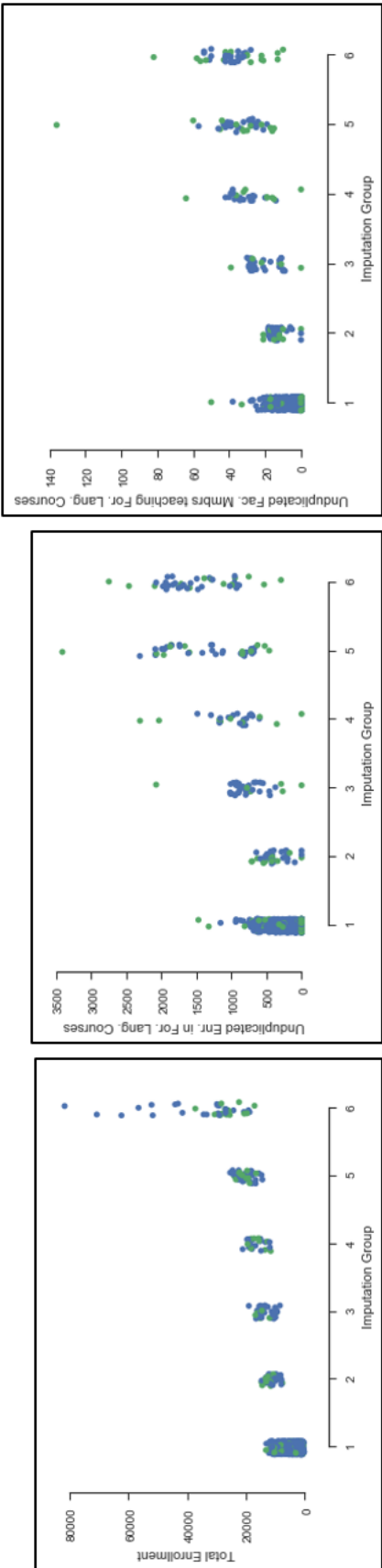
Figures C1 through C5 (following pages) provide a graphical representation of the actual and estimated data for English, Foreign Language, History, Philosophy, and Other Humanities. In each set of graphs, the left-most graph is total enrollment (from IPEDS), the middle graph is unduplicated enrollments in courses in the discipline, and the right-most graph is faculty members teaching courses in the discipline. The total enrollment is known for every institution—whether or not the institution responded.

Figure C1: Total Enrollment, Unduplicated Enrollment, and Faculty Members Teaching Courses in English, by Imputation Group



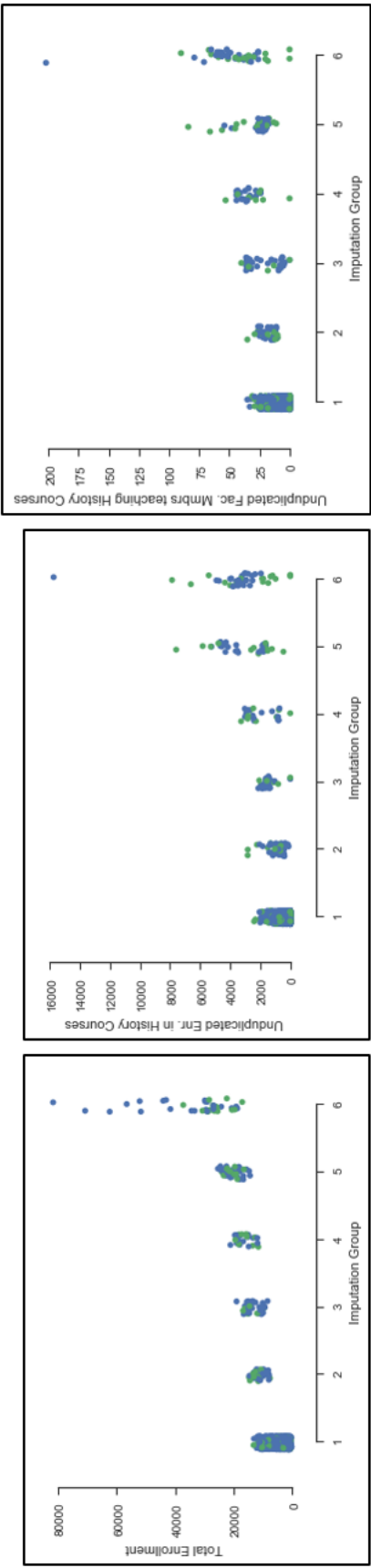
Responding institutions are represented with green bullets; non-responding institutions are represented by blue bullets.

Figure C2: Total Enrollment, Unduplicated Enrollment, and Faculty Members Teaching Courses in Foreign Languages, by Imputation Group



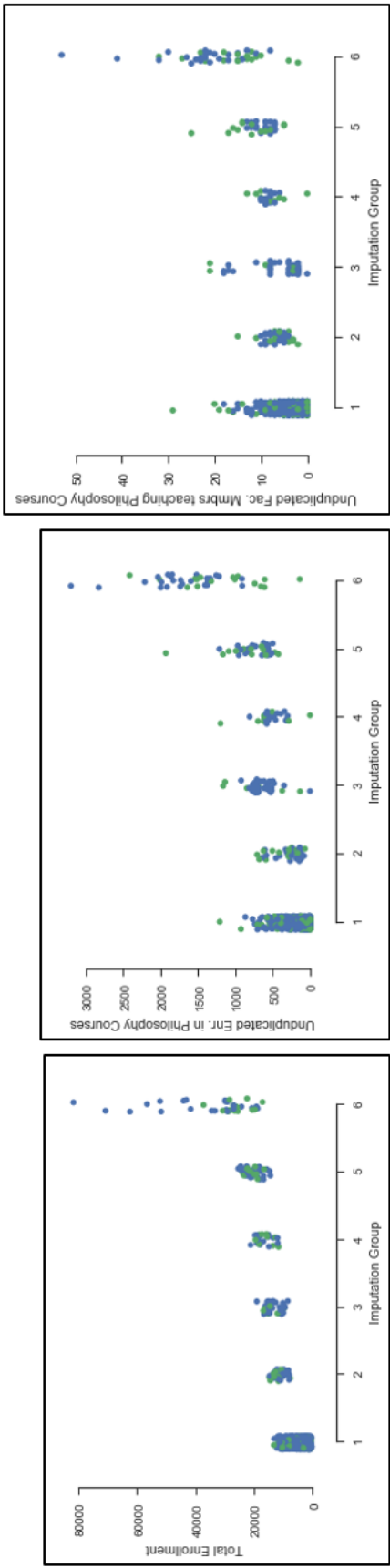
Responding institutions are represented with green bullets; non-responding institutions are represented by blue bullets.

Figure C3: Total Enrollment, Unduplicated Enrollment, and Faculty Members Teaching Courses in History, by Imputation Group



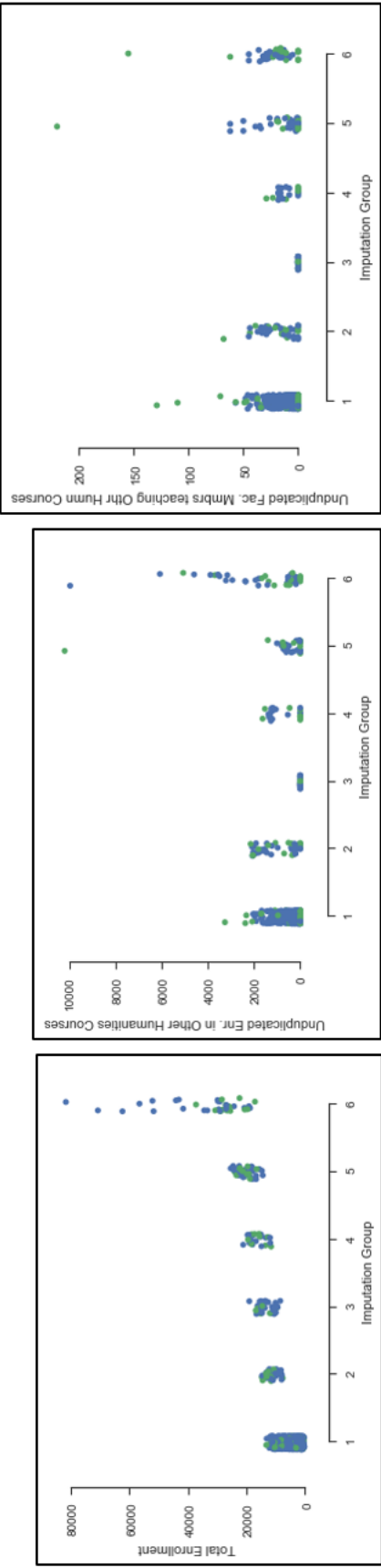
Responding institutions are represented with green bullets; non-responding institutions are represented by blue bullets.

Figure C4: Total Enrollment, Unduplicated Enrollment, and Faculty Members Teaching Courses in Philosophy, by Imputation Group



Responding institutions are represented with green bullets; non-responding institutions are represented by blue bullets.

Figure C5: Total Enrollment, Unduplicated Enrollment, and Faculty Members Teaching Courses in Other Humanities, by Imputation Group



Responding institutions are represented with green bullets; non-responding institutions are represented by blue bullets.

Attachment D: The Questionnaire

The questionnaire was delivered electronically. A unique link was sent to each institution. We include here a version which was provided online for respondents who wished to print the questionnaire.

Survey of Humanities in Two-Year Colleges

- **For all questions, please respond for the same institutional unit that you do for the purposes of IPEDS, whether you report the information required by IPEDS directly to the U. S. Department of Education or to another entity within your system or state.**
- We are collecting data for the **Fall Term** of the **2015-16** academic year
- If you need assistance in answering any of the questions, contact Carolyn Fuqua at cfuqua@amacad.org
- When you have compiled your data, go to statisticalresearchcenter.org/humanities to enter it. You will need your id.

Thank you!

Note your id here: _____ You will need this six-digit code to enter the data once you have compiled it.

Section 1: Students

Total Enrollment

- 1) For the fall term of the 2015–16 academic year, please indicate how many students were enrolled at your institution.

For the unduplicated headcount

- Report student race/ethnicity in the same way that you do for the purposes of IPEDS (using the “new” IPEDS race/ethnicity categories).
- A *full-time student* is defined as a student enrolled for 12 or more semester credits or 12 or more quarter credits, or 24 or more contact hours a week

Total Institutional Enrollment			
Duplicated Headcount	Unduplicated Headcount		
	Male	Hispanic	Full-Time
	Female	White	Part-Time
		Black	
		Asian	
		Other	

Section 1: Students, continued

Enrollment in For-Credit Humanities Courses

2) For the fall term of the 2015–16 academic year, please indicate the enrollment in all for-credit, college-level courses in each of the humanities disciplines/subjects indicated below.

- Exclude developmental and remedial courses.
- Include all dually- or concurrently-enrolled students.

Course Discipline / Subject	Enrollment	
	Duplicated Headcount	Unduplicated Headcount
English Language & Literature CIP codes: All of 23 except 23.1303 <ul style="list-style-type: none"> • Includes English composition, other academic writing, and creative writing courses • Except technical, professional, and scientific writing and journalism courses <p style="text-align: right;">N/A (not offered) <input type="radio"/></p>	<input type="text"/>	<input type="text"/>
Foreign Language & Literature CIP codes: All of 16 <ul style="list-style-type: none"> • Includes Linguistics and American Sign Language • Excludes ESL <p style="text-align: right;">N/A (not offered) <input type="radio"/></p>	<input type="text"/>	<input type="text"/>
History CIP codes: All of 54 and 50.0703 <ul style="list-style-type: none"> • Includes Art History <p style="text-align: right;">N/A (not offered) <input type="radio"/></p>	<input type="text"/>	<input type="text"/>
Philosophy CIP codes: 38.00–38.0199 <ul style="list-style-type: none"> • Excludes religious studies and vocations <p style="text-align: right;">N/A (not offered) <input type="radio"/></p>	<input type="text"/>	<input type="text"/>
Humanities <ul style="list-style-type: none"> • Includes courses called “Humanities” or coded as such in your information system • Excludes courses included in previous categories <p style="text-align: right;">N/A (not offered) <input type="radio"/></p>	<input type="text"/>	<input type="text"/>

Section 1: Students, continued

Enrollment in For-Credit Humanities Courses

- 3) **For the fall term of the 2015–16 academic year, please provide an unduplicated student headcount, along with the requested demographic information, for all humanities courses listed below.** (These are the courses included in the previous question. The headcount for all humanities course may be smaller than the sum of the unduplicated headcounts provided on the previous screen since a student may be enrolled in courses in more than one of the humanities disciplines.)

- Report student race/ethnicity in the same way that you do for the purposes of IPEDS (using the “new” IPEDS race/ethnicity categories).
- A *full-time* student is defined as a student enrolled for 12 or more semester credits or 12 or more quarter credits, or 24 or more contact hours a week.
- **English Language & Literature**
CIP Codes: All of 23 except 23.1303
 - *Includes* English composition, other academic writing, and creative writing courses
 - *Except* technical, professional, and scientific writing and journalism courses
- **Foreign Language & Literature**
CIP Codes: All of 16
 - *Includes* Linguistics and American Sign Language
 - *Excludes* ESL
- **History**
CIP Codes: All of 54 and 50.0703
 - *Includes* art history
- **Philosophy**
CIP Codes: 38.00–38.0199
 - *Excludes* religious studies and vocations
- **Humanities**
 - *Includes* courses called “Humanities” or coded as such in your information system
 - *Excludes* courses in previous categories

Unduplicated Headcount for Humanities Course En					
Male		Hispanic		Full-Time	
Female		White		Part-Time	
		Black			
		Asian			
		Other			

Average age of Humanities Students	
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Section 1: Students, continued

Enrollment in Humanities-Related Courses

- 4) For the fall term of the 2015–16 academic year, please indicate the enrollment in the courses indicated below.

Course Discipline / Subject	Enrollment	
	Duplicated Headcount	Unduplicated Headcount
Developmental Reading & Writing (offered as a combined course) N/A (offered separately or not at all)o	<input type="text"/>	<input type="text"/>
Developmental Reading (offered as a separate course) N/A (offered in a combined course or not at all)o	<input type="text"/>	<input type="text"/>
Developmental Writing (offered as a separate course) N/A (offered in a combined course or not at all)o	<input type="text"/>	<input type="text"/>
English as a Second Language N/A (not offered)o	<input type="text"/>	<input type="text"/>

Section 1: Students, continued

Enrollment of High School Students in Humanities Courses

5) For the fall term of the 2015–16 academic year, please provide duplicated and unduplicated headcounts of all high school students enrolled in for-credit, college-level courses in each of the humanities disciplines/subjects indicated below.

- Include all enrolled high school students whether they are enrolled as part of a dual/concurrent enrollment program or early college high school, or are taking courses on their own, outside of any program.

Course Discipline / Subject	High School Student Enrollment	
	Duplicated Headcount	Unduplicated Headcount
English Language & Literature CIP codes: All of 23 except 23.1303 <ul style="list-style-type: none"> • Includes English composition, other academic writing, and creative writing courses • Except technical, professional, and scientific writing and journalism courses N/A (not offered)O		
Foreign Language & Literature CIP codes: All of 16 <ul style="list-style-type: none"> • Includes Linguistics and American Sign Language • Excludes ESL N/A (not offered)O		
History CIP Codes: All of 54 and 50.0703 <ul style="list-style-type: none"> • Includes Art History N/A (not offered)O		
Philosophy CIP Codes: 38.00–38.0199 <ul style="list-style-type: none"> • Excludes religious studies and vocations N/A (not offered)O		
Humanities <ul style="list-style-type: none"> • Includes courses called “Humanities” or coded as such in your information system • Excludes courses included in previous categories N/A (not offered)O		
Please provide an unduplicated headcount for all high school students enrolled courses in the disciplines/subjects indicated above. (This number may be smaller than the sum of the unduplicated headcounts above since a student may be enrolled in more than one of the humanities disciplines/subjects.)		

Section 2: Faculty

Institutional Total

6) For the fall term of the 2015–16 academic year, please indicate the total number of faculty members (unduplicated headcount) teaching at your institution.

- *Include* faculty of all types in your count (full-time, part-time, adjunct, tenured, and non-tenured)
- *Include* any faculty who teach college-level courses to high-school students *for credit from your institution*, whether the course is taught on campus or in another setting

Total Number of Faculty Members (Unduplicated Headcount)

Section 2: Faculty, continued

Faculty Teaching For-Credit Humanities Courses

7) For the fall term of the 2015–16 academic year, please indicate the total number of faculty members teaching college-level courses in each of the humanities disciplines/subjects indicated below.

- Include faculty who teach college-level courses to high-school students *for credit from your institution*, whether the course is taught on campus or in another setting
- Include faculty of all types in your count (full-time, part-time, adjunct, tenured, and non-tenured)

Course Discipline / Subject	Faculty (Unduplicated Headcount)
English Language & Literature CIP codes: All of 23 except 23.1303 <ul style="list-style-type: none"> • Includes English composition, other academic writing, and creative writing courses • Except technical, professional, and scientific writing and journalism courses N/A (not offered) <input type="radio"/>	<input type="text"/>
Foreign Language & Literature CIP codes: All of 16 <ul style="list-style-type: none"> • Includes Linguistics and American Sign Language • Excludes ESL N/A (not offered) <input type="radio"/>	<input type="text"/>
History CIP codes: All of 54 and 50.0703 <ul style="list-style-type: none"> • Includes Art History N/A (not offered) <input type="radio"/>	<input type="text"/>
Philosophy CIP codes: 38.00–38.0199 <ul style="list-style-type: none"> • Excludes religious studies and vocations N/A (not offered) <input type="radio"/>	<input type="text"/>
Humanities <ul style="list-style-type: none"> • Includes courses called “Humanities” or coded as such in your information system • Excludes courses included in previous categories N/A (not offered) <input type="radio"/>	<input type="text"/>
Please provide an unduplicated headcount for all faculty teaching humanities courses in the disciplines/subjects indicated above. (This number may be smaller than the sum of the unduplicated headcounts above since a faculty member may teach a course in more than one of the humanities disciplines/subjects.)	<input type="text"/>

Section 2: Faculty

Faculty Teaching Humanities-Related Courses

- 8) For the fall term of the 2015–16 academic year, please provide unduplicated headcounts of faculty for the courses indicated below.

Course Discipline / Subject	Faculty (Unduplicated Headcount)
Developmental Reading & Writing (offered as a combined course) N/A (offered separately or not at all)O	<input type="text"/>
Developmental Reading (offered as a separate course) N/A (offered in a combined course or not at all)O	<input type="text"/>
Developmental Writing (offered as a separate course) N/A (offered in a combined course or not at all)O	<input type="text"/>
English as a Second Language N/A (not offered)O	<input type="text"/>

Educational Background of Faculty

- 9) Describe the minimum education requirements for faculty teaching for-credit, college-level humanities courses at your institution.

- Include information regarding *level of degree required*
- Include any requirements regarding the *academic field or discipline* in which the degree was granted

If you wish to return this form by mail (instead of submitting via the web form), please complete the following.

Your id: _____

Your name: _____

Your email address: _____

Your institution: _____

Mailing address: _____

City, State Zip: _____

Please mail the completed form to: AIP Statistical Research Center
Attn: Humanities in TYCs
1 Physics Ellipse
College Park, MD 20740

Attachment E: Suggested Changes to the Questionnaire for Future Studies

We commend the questionnaire designers on the development of a questionnaire that worked remarkably well to capture the rich data described herein. We do have suggestions for changes should any future rounds of this study be conducted. These suggestions take two forms: omissions and revisions.

Omissions

Based on multicollinearity issues during imputation, we suggest omitting all instances of duplicated headcounts, race, status (full-time or part-time), sex, and age.

Using weighted estimates instead of imputation for non-respondents would allow the inclusion of these omitted variables; however, we suggest omitting all instances of duplicated headcounts due to respondent confusion.

Omitting these variables would make the questionnaire easier to complete and might improve the response rate.

Enrollment in Any Humanities Course

As noted in Appendix C, there appeared to be confusion regarding this question. We have attempted to provide an estimate using the techniques described previously. We suggest asking this question separate from the more specific disciplinary courses. This may alleviate some of the confusion. In addition, omitting duplicated headcounts may also alleviate some of the confusion. Furthermore, it might be helpful to provide a sample questionnaire that has been “completed” showing the relationship between enrollment in any humanities course and the other enrollment data requested.

Developmental Courses

We believe the community would like information on developmental courses. Some of the responses appeared to be inconsistent with enrollments indicated in combined developmental reading & writing and in either developmental reading or developmental writing, but not the other separate developmental course. We did not know how to interpret these data since the nature of the combined course suggests that both reading and writing are offered together while the separate course indicates that only reading or writing is offered in the course.

In order to understand what the respondents mean, we believe additional questions about the sequence of developmental courses should be asked in addition to questions about enrollments in these courses.