

What will they learn?

A Report on General Education Requirements at 100 of the Nation's Leading Colleges and Universities



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American Council of Trustees and Alumni

FOREWORD

What will they learn?

That is the simple question the American Council of Trustees and Alumni asks in this report. We do so by exploring the state of general education, those courses designed to give college students a firm grounding in the areas of knowledge they will use for a lifetime. Specifically, we evaluate whether 100 major institutions require seven key subjects: English composition, literature, foreign language, U.S. government or history, economics, mathematics, and science.

What we found is alarming. Even as our students need broad-based skills and knowledge to succeed in the global marketplace, our colleges and universities are failing to deliver. Topics like U.S. government or history, literature, mathematics, and economics have become mere options on far too many campuses. Not surprisingly, students are graduating with great gaps in their knowledge—and employers are noticing. If not remedied, this will have significant consequences for U.S. competitiveness and innovation.

Higher education used to uphold academic standards against outside pressure. Today, however, the pressure to dumb things down often comes from inside. As a consequence, we now have what former University of Chicago president Robert Maynard Hutchins called "education by the adding machine," where academics refuse to decide what is important, leaving students to fend for themselves. But education cannot be left to chance.

Paying for college ranks with purchasing a home in its impact on the family budget. Yet many parents and students are spending a fortune with too little to show for it. It is high time they had good information on actual college expectations, not just reputation. We know of no other place where they can find that, including the vaunted *U.S. News & World Report* rankings.

That is why ACTA is issuing this report—and making much more information available at **WhatWillTheyLearn.com**. Our assessment cuts through the verbiage in college catalogs and shows what really matters: what the students will be expected to learn. Especially in this era of rising tuition and uncertain economic prospects, we hope our findings will help parents and students vote with their wallets and motivate trustees and alumni to demand more of their institutions.

Anne D. Neal President



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At its best, general education is about the unity of knowledge, not about distributed knowledge. Not about spreading courses around, but about making connections between different ideas. Not about the freedom to combine random ingredients, but about joining an ancient lineage of the learned and wise. And it has a goal, too: producing an enlightened, self-reliant citizenry, pluralistic and diverse but united by democratic values.

Harry R. Lewis Former Dean, Harvard College WhatWillTheyLearn.com



FAMILIES ARE PAYING MORE THAN EVER for higher education. But what are they getting?

Of course, one can "get" many things out of a higher education: professional contacts, personal growth, and enduring friendships, just to name a few. These, it must be said, are important parts of the college experience. But they are not the core purpose of our colleges and universities. The real purpose is learning.

That is why this report asks a simple question about today's students: What will they learn? Specifically, will they gain the knowledge and skills they need to compete in the global marketplace, lead our nation thoughtfully, and be lifelong learners? Many college guides and ranking systems measure institutions' prestige and reputation, but no guide has looked at what *students are actually required to learn*. This report, along with its companion website, **WhatWillTheyLearn.com**, aims to do just that.

Whether students are prepared is an extremely important question—not just for our students, but also for America's future, since today's college graduates are tomorrow's leaders. And the truth is, most people assume the answer to this question is "yes." Colleges surely trumpet this claim. But is this really true? The American Council of Trustees and Alumni decided to find out.

We did so amidst startling evidence that—even as policymakers seek to expand the number of people who go to college—students there are not learning what they need to know. According to a study by the National Center for Education Statistics, only 31 percent of college graduates can read and understand a

complex book.¹ Employers are increasingly complaining that graduates of four-year colleges lack the writing and analytical skills necessary to succeed in the workplace: In a 2006 survey, for example, only 24 percent thought graduates of four-year colleges were "excellently prepared" for entry-level positions.² College seniors perennially fail tests of their civic and historical knowledge.³ And rates of leisure reading have taken a nosedive.⁴

Our study illuminates why these statistics are so dismal: Students seldom learn what they are not expected to learn.

This is because our colleges and universities have largely abandoned a coherent, content-rich general education curriculum. ACTA surveyed 100 four-year institutions for this report—large and small, public and private, in every state of the Union—and found that most are not insisting that students study what they need to know. Almost half do not require a genuine, college-level math course; almost 90 percent do not require students to take a survey course in American government or history; and only two require students to take a basic course in economics. The general education curriculum has become virtually anything goes.

To be clear, this study examines general education because these requirements encompass the courses the vast majority of students must take, regardless of major. Ideally, these courses—commonly known as the core curriculum—ensure that students encounter broad, foundational knowledge in both the arts and sciences, knowledge that provides the intellectual backbone for lifelong learning and informed citizenship. No matter how good individual majors are, if our colleges don't get general education right, students will get a spotty education that will not prepare them for a life well lived.

Traditionally, the general education curriculum was subject to two limits. First, the core courses were relatively few in number, and second, they were general in scope. The result was a curriculum that consisted of a small number of broad classes, like "Great Works of Philosophy" or "Landmarks of Literature." Courses typically covered the most important events, ideas, or works known to mankind—material considered essential for an educated person.

While most colleges today claim they are providing a strong core curriculum, in fact they do so in name only. Instead of a limited number of courses, broadbased in focus, institutions now typically demand that students take courses in several wide subject areas—the so-called distribution requirements. Within each subject area, it is not uncommon for students to have dozens or even hundreds of courses from which to choose—many of them narrow or frivolous. At one major state university, for example, students may choose from over one hundred different classes to meet a Historical Studies distribution requirement. At other colleges, students may satisfy requirements with courses such as "Introduction to Popular TV and Movies" and "Science of Stuff." Still other colleges allow "Bob Dylan" to meet a literature requirement and "Floral Art" to meet a natural science requirement.⁵

In recent years, college administrators have tended to allow more and more courses to satisfy the requirements, often in response to pleading by deans and professors. Some argue that students *should* be free to pick and choose which courses they take. And allowing students to have some choice is surely reasonable. But problems arise when having too many choices undermines the goal of giving students a coherent education. No eighteen-year-old, even the brightest, should have to determine which combination of courses comprises a solid liberal education. Once distribution requirements become too loose, students inevitably graduate with an odd list of random, unconnected courses. It's not surprising that in a recent survey of college administrators, only a little over a third characterized their general education programs as consisting of a coherent sequence of courses.⁶ A truly coherent core curriculum would be a much better approach.



WHY IS A CORE CURRICULUM IMPORTANT?

TO ANSWER THIS QUESTION, one need go no farther than the colleges themselves, many of which showcase general education programs as providing a common foundation of shared knowledge for their undergraduate students. Indiana University-Bloomington promises students "the fundamental knowledge, skills, and experience essential for a full, rich, and rewarding life." Princeton University touts an education that will "transcend the boundaries of specialization and provide [all students] with a common language and common skills." At the University of Arizona, general education offers "the fundamental skills and broad base of knowledge that all college-educated adults must have." Meanwhile, the University of Rhode Island hails "the study of fundamentals that builds on the student's previous education and continues through the undergraduate years and beyond." 10

As these descriptions suggest, one of the great advantages of a sound core curriculum is that it ensures students are exposed to subject areas that they might otherwise pass up—courses without which their education would be all the poorer. It is in this process of encountering knowledge from a variety of subjects that students learn and practice the analytical and critical thinking skills that are foundational to being an educated person. Familiarity with the most influential events, ideas, and works provides context for thinking critically about the more narrow, specialized topics students will encounter as upperclassmen. In short, a well-crafted core curriculum is challenging, content–rich, and coherent—and it is something that is not necessarily gained by simply amassing 120 credit hours over eight semesters.

Increasingly, the demands of the modern workforce necessitate just such a broad general education. A survey commissioned by The Conference Board and others asked employers what they believe are "very important" basic skills for job success among new workforce members—including graduates of four-year colleges. According to the report, significant numbers of employers list writing, reading comprehension, mathematics, science, and foreign language as very important or important basics skills and knowledge. ¹¹ Meanwhile, few of the employers surveyed believe four-year college graduates have "excellent" knowledge or skills in any of these areas. ¹²

This need for general knowledge is further underscored by the fact that the Bureau of Labor Statistics reports that current workers hold an average of 10.8 different jobs between the ages of 18 and 42. ¹³ Job descriptions may vary, but the skills and knowledge that come from a solid general education equip graduates with the flexibility to adapt to a changing job market.

Another important benefit of a coherent core curriculum is its ability to foster a "common conversation" among students, connecting them more closely with faculty and with each other. As Columbia University notes on its website, common general education courses "create a community of intellectual discourse that spills over beyond the classroom and into dormitories, dining halls, and the many cafés that surround the campus." Without this common conversation, the campus risks becoming less a community of scholars and more a disjointed jumble of isolated groups.

Finally, as more and more students with various levels of preparedness go to college, a coherent core curriculum offers an unparalleled way for them to make the transition from high school to more advanced study. At a time when remediation is a serious issue facing many colleges, the general education curriculum provides an opportunity to bolster the basic skills and knowledge students will need. First- and second-year general education courses can fill in any gaps in a student's previous education and build upon existing knowledge. In high school, students may have had a textbook introduction to American history, but at the college level, they can advance to primary documents and the

kind of critical analysis that cannot be gained from a two-paragraph summary of Thomas Jefferson or Rosa Parks. Similarly, students who were exposed to the basics of chemistry or physics in high school can gain the more robust, hands-on experience of a laboratory environment with faculty who are active researchers in their fields. These aspects of a rigorous general education not only prepare students to excel in studying their subsequent majors but also provide them with the skills necessary to pursue additional learning throughout the rest of their lives.



WHAT DOES A GOOD CORE CURRICULUM INCLUDE?

A GENERAL EDUCATION CURRICULUM NEEDS TO GIVE STUDENTS the

essential skills and knowledge upon which the rest of their education—not to mention their future employment—depends. There is surely no one "correct" way of doing this. Indeed, existing models vary widely. Two of the most well-known general education programs in the country, for example, those at Columbia University and the University of Chicago, require students to study classic works in philosophy, history, and literature and grapple with great thinkers such as Aristotle, Rousseau, and Kant. ¹⁵

Such programs are undoubtedly challenging, content-rich, and coherent, yet their particular approach is difficult to compare with other colleges and universities. For the purposes of this study, ACTA therefore uses measures that allow a large number of diverse programs to be compared against both specific standards and each other. Far from suggesting that there is only one way to build a core or one way to judge the rigor of a college's general education requirements, ACTA's purpose is to provide parents, students, trustees, and college administrators with a starting point for examining the actual content of curricula.

In considering what should be included in a well-rounded college education, most people will agree that the primary goal is for students to learn critical habits of mind. These skills are not taught in any one class, but are built and refined over time as students wrestle with great thinkers in many fields of knowledge. A necessary prerequisite for studying the human world is an ability to communicate in it. Therefore, it is essential that students become proficient in their reading, writing, and speaking. From this, it follows that higher education should also introduce students to great literary works. Not only does the study of excellent

literature speak to the breadth of human experience, but it also inculcates the habits of reading and reflection that students will use for the rest of their lives. In many cases, college marks the last time students will read books they do not choose themselves, making it even more pressing to offer them an enriching educational experience.

Another excellent tool for understanding the breadth of human experience is the study of a foreign language. Language, as a direct reflection of thought, provides glimpses into the ways in which people of different cultures perceive the world. Additionally, in an increasingly interconnected world, employers highly prize competency in a foreign language.

Although knowledge about a variety of cultures is valuable, higher education in a free society is also the education of citizens. Therefore, it is essential that colleges and universities ensure that students have a working knowledge of the history and governing institutions of this country. A comprehensive understanding of American national history and government that includes both chronological and thematic breadth is indispensable for the formation of citizens and for the preservation of our free institutions.

Just as studying the human world requires language, studying the natural world requires mathematics and science. Numeracy at the college level allows students to evaluate, for instance, statistics they read in the newspaper about the federal budget. An ability to reason quantitatively in turn enables students to master the basic principles of scientific experimentation and observation that are essential for understanding the world in which we live. Science courses such as chemistry, biology, and physics build the analytical and critical thinking skills that today's employers demand while at the same time preparing graduates to navigate the complex and interconnected issues that are regularly debated on the local and national level.

Finally, in today's competitive global economy, understanding the principles that govern the allocation of scarce resources—economics—is becoming more and more essential. Although economics has not traditionally been a part of the liberal arts core, today's international markets, not to mention the impact

economic policies have on the lives of all citizens, necessitate instruction in basic economic principles for informed citizenship.

Of course, arguments can be made for including any number of additional topics, such as art, music, psychology, sociology, philosophy, or world history. But a core curriculum that fails to require most of the seven key subjects outlined in this report will not satisfy the basic demands of general education. Several institutions go above and beyond this model—and wherever possible, we note that they do—but at many others, students run the risk of completing their degrees with only a patchwork of information, not the coherent understanding that characterizes an educated person.



CORE CURRICULUM SURVEY

HOW ARE SUBJECT AREAS DEFINED?

Of course, simply having requirements called Literature or Mathematics does not in fact mean that students will actually study those subjects in a manner appropriate for general education purposes. As previously noted, distribution requirements on most campuses today permit students to pick from a wide range of courses that often are narrow or even outside the stated field altogether. Accordingly, to determine whether institutions in fact have a solid core curriculum, ACTA defined success in each of the seven subject areas outlined, as follows:

Composition. An introductory college writing class, focusing on grammar, style, clarity, and argument. "Writing-intensive" courses or seminars and writing "for" a discipline where the instructors are not from the English or composition department do not count if they are the only component of a writing requirement. Remedial courses and SAT scores may not be used to satisfy a composition requirement.

Literature. A comprehensive literature survey. Narrow, single-author, or esoteric courses do not count for this requirement, but introductions to broad subfields (such as British or Latin American literature) do.

Foreign Language. Competency at the intermediate level, defined as at least three semesters of college-level study in any foreign language, or three years of high school work, or an appropriate examination score.

U.S. Government or History. A survey course in either U.S. government or history, with enough chronological and topical breadth to expose students to the sweep of American history and institutions. Narrow,

niche courses do not count for the requirement, nor do courses that only focus on a narrow chronological period or a specific state or region.

Economics. A course covering basic economic principles, generally an introductory micro- or macroeconomics course taught by faculty from the economics or business departments.

Mathematics. A college-level course in mathematics. Includes advanced algebra, trigonometry, calculus, computer programming, statistics/ probability, or mathematical reasoning at or above the intermediate level. Remedial courses or SAT Reasoning Test scores may not be used as substitutes. Symbolic or mathematical logic courses and computer science courses count, while linguistics courses or computer literacy courses do not, as the math content is usually minimal.

Natural or Physical Science. A course in astronomy, biology, chemistry, geology, physics, or environmental science, preferably with a laboratory component. Overly narrow courses, courses with weak scientific content, and courses taught by faculty outside of the science departments do not count. Psychology courses count if they are focused on the biological, chemical, or neuroscience aspects of the field.

HOW ARE INSTITUTIONS GRADED?

With these criteria in mind, ACTA examined the latest online course catalogs available in early 2009 to determine whether an institution (or, in many cases, the Arts & Sciences or Liberal Arts divisions) required a course in each of these seven disciplines. If a qualifying course were one of several options that also included unqualified courses, the institution did not receive credit for the subject. Each institution was assigned a grade based on how many of these seven subjects it requires students to complete. The grading system is as follows:

- A 6-7 core subjects required
- **B** 4-5 core subjects required
- C 3 core subjects required
- **D** 2 core subjects required
- F 0-1 core subjects required



KEY FINDINGS

ACTA'S STUDY INCLUDES A WIDE RANGE OF INSTITUTIONS, from

large public universities like Ohio State University and the University of Texas-Austin to small private liberal arts colleges like Haverford College and Amherst College. We looked at the top 20 National Universities and the top 20 Liberal Arts Colleges as reported in the 2009 *U.S. News & World Report* America's Best Colleges rankings. ¹⁶ These colleges and universities are widely regarded as the top schools in the nation based on selective admissions, name recognition, and national reputations. We also examined major public universities from all 50 states, to give our study geographic as well as institutional diversity.

Overall, the results are troubling. Out of the 100 institutions we examined, 25 received an F for their core curricula, 17 got Ds, and 20 got Cs. Only 33 out of the 100 earned Bs, and only 5 out of the entire group earned an A. Although the style and content of the general education programs vary greatly from institution to institution, there are several general observations that can be made.

Colleges aren't delivering on their promises.

In their course catalogs and mission statements, colleges frequently extol the virtues of a broad-based, "well-rounded" liberal arts education. However, these worthy sentiments often do not translate into worthy general education requirements. The disconnect is especially notable when it comes to liberal arts schools. In particular, the top Liberal Arts Colleges have allowed their general education curricula to deteriorate. Places like Williams College and Amherst

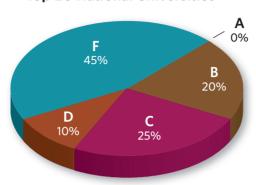
College proclaim their dedication to the principles and goals of liberal education, but in fact have virtually no requirements.¹⁷ Wesleyan University promises that its general education curriculum will allow freshmen and sophomores to experience the "full dimension of intellectual breadth vital to a liberal education." However, students can bypass hard science courses in favor of classes such as "The Psychology of Reading" or "Physics for Future Presidents." And they can avoid broad surveys of history and literature altogether with such courses as "Everyday Forms of Resistance" and "Oral Histories and the Portland Brownstone Quarry." Indeed, 70 percent of the so-called Liberal Arts Colleges have two or fewer of the course requirements we analyzed. Rather than offering a true liberal education designed to liberate the mind, these schools are in effect leaving it up to students to figure out what they will need—and families are paying dearly for the privilege of a do-it-yourself curriculum.

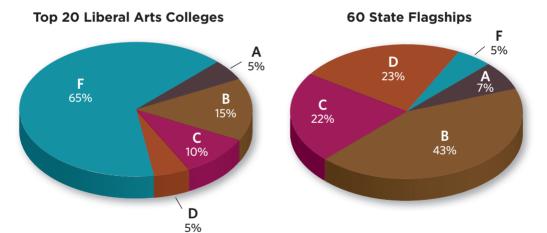
Other colleges and universities give the appearance of requirements, but the long list of eclectic courses that can be taken renders the notion of a "requirement" meaningless. Stanford University, for example, pledges to "introduce students to the major social, historical, cultural, and intellectual forces that shape the contemporary world," but then allows students to fulfill their American Cultures requirement with courses such as "Ki ho'alu: The New Renaissance of a Hawaiian Musical Tradition."

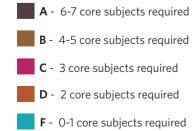
At Northwestern University, the Formal Studies requirement—a broader name for mathematics—can be met with courses on music theory or Slavic linguistics. And at Cornell University, the Literature and the Arts distribution category allows students to take anything from "International Film of the 1970s" to "Music and Choreography." Whatever the merits of these courses, they do not provide the broad foundation of knowledge that general education as a rule ought to require.

HOW WELL ARE INSTITUTIONS PROVIDING A BROAD-BASED EDUCATION?

Top 20 National Universities







Paying a lot doesn't generally get you a lot.

This report makes clear that cost and reputation are not good predictors of what students will be expected to learn. Most of *U.S. News & World Report's* top 20 National Universities and top 20 Liberal Arts Colleges are charging nearly \$40,000 each year in tuition and fees, but more than half of these same schools require only one, if any, of the seven core subjects we examined. In sharp contrast, 72 percent of public universities—where the median in-state tuition and fees is a mere \$6,605—require at least three.

For example, one of the most expensive institutions we studied, Vassar College, charges \$40,210 in tuition and fees but does not require a single one of our seven core subjects. Meanwhile, the Fulbright College of Arts & Sciences at the University of Arkansas has an exemplary curriculum that requires both introductory and advanced English composition courses, a world literature survey, intermediate-level foreign language study, an American history survey, two courses in mathematics at or above the level of college algebra, and 12 semester hours of natural sciences with laboratory. In-state tuition and fees at Arkansas are only \$6,400 per year.

Of course, there are many other factors that differentiate institutions and a range of qualities families look for in an education. But generally speaking, the higher the tuition, the more likely it is that students are left to devise their own "general education." And while we would like to assume students can be counted on to educate and challenge themselves, students are often competing amongst themselves for honors, jobs, and graduate school admission. These grade-conscious students tend to opt for classes in easier or more familiar subjects rather than choose the intellectually challenging courses that will guarantee them a well-rounded education.

IS THE CURRICULUM WORTH THE COST?

GRADE: A	Tuition & Fees*
University of Arkansas	\$6,400 / \$15,278
City University of New York-Brooklyn College	\$4,381 / \$11,181
University of Texas-Austin	\$8,130 / \$25,722
Texas A&M University	\$7,844 / \$16,274
United States Military Academy	\$0
GRADE: B	
University of Alabama	\$6,400 / \$18,000
University of Alaska-Fairbanks	\$4,756 / \$14,176
Auburn University	\$6,500 / \$18,260
University of Chicago	\$37,632
Claremont McKenna College	\$37,160
Columbia University	\$39,326
University of Delaware	\$8,646 / \$21,126
Duke University	\$37,525
University of Georgia	\$6,030 / \$22,342
University of Iowa	\$6,544 / \$20,658
University of Kansas	\$7,042 / \$17,119
Kansas State University	\$6,627 / \$16,931
Louisiana State University	\$5,086 / \$13,800
Michigan State University	\$10,740 / \$26,134
University of Minnesota	\$10,634 / \$14,634
University of Mississippi	\$4,932 / \$11,436
University of Missouri	\$8,450 / \$19,514
University of Nebraska-Lincoln	\$6,584 / \$17,106
University of Nevada-Las Vegas	\$4,463 / \$15,558

^{* 2008-2009} tuition and fees according to U.S. News & World Report's 2009 edition of America's Best Colleges. Public university figures include in-state tuition/out-of-state tuition and fees.

University of North Carolina-Chapel Hill	\$5,396 / \$22,294
University of Notre Dame	\$36,847
Ohio State University	\$8,679 / \$21,918
University of Oklahoma	\$5,245 / \$13,229
Oklahoma State University	\$6,202 / \$16,556
Purdue University	\$7,750 / \$23,234
University of South Carolina	\$8,838 / \$22,908
University of South Dakota	\$5,828 / \$11,587
University of Tennessee	\$6,188 / \$18,728
University of Utah	\$5,337 / \$16,796
Washington and Lee University	\$37,412
Wellesley College	\$36,640
West Virginia University	\$5,100 / \$15,770
University of Wyoming	\$3,173 / \$10,013
GRADE: C	
University of California-Los Angeles	\$7,034 / \$26,102
Carnegie Mellon University	\$38,844
University of Colorado-Boulder	\$7,278 / \$24,936
University of Connecticut	\$9,338 / \$24,050
Dartmouth College	\$36,915
Davidson College	\$33,479
Emory University	\$36,336
University of Florida	\$3,790 / \$21,400
University of Hawaii-Manoa	\$6,259 / \$16,915
University of Idaho	\$4,632 / \$14,712
Iowa State University	\$6,360 / \$17,350
University of Kentucky	\$7,736 / \$15,884
University of Maine	\$9,152 / \$22,652

IS THE CURRICULUM WORTH THE COST? (continued)

GRADE: C (continued)	Tuition & Fees
University of Massachusetts-Amherst	\$10,227 / \$18,450
Pomona College	\$35,625
Princeton University	\$34,290
Stanford University	\$36,030
University of Vermont	\$12,844 / \$29,682
College of William and Mary	\$10,246 / \$29,326
GRADE: D	
University of Arizona	\$5,542 / \$18,676
Carleton College	\$38,046
Harvard University	\$36,173
University of Illinois-Urbana-Champaign	\$11,261 / \$25,334
Indiana University-Bloomington	\$8,231 / \$24,769
University of Michigan	\$11,111 / \$32,401
University of Montana	\$5,347 / \$16,987
University of New Hampshire	\$11,756 / \$25,236
University of New Mexico	\$4,570 / \$14,942
State University of New York-Buffalo	\$6,278 / \$12,538
State University of New York-Stony Brook	\$5,758 / \$12,018
University of North Dakota	\$6,130 / \$14,523
University of Oregon	\$6,291 / \$19,428
University of Pennsylvania	\$37,526
Pennsylvania State University	\$13,706 / \$24,940
University of Virginia	\$9,300 / \$29,600
University of Wisconsin	\$7,568 / \$21,818

GRADE: F	
Amherst College	\$37,640
Bowdoin College	\$38,190
Brown University	\$37,718
University of California-Berkeley	\$8,932 / \$29,540
Colgate University	\$39,545
Cornell University	\$36,504
Grinnell College	\$31,098
Hamilton College	\$38,600
Haverford College	\$37,525
Johns Hopkins University	\$37,700
Middlebury College	\$49,210*
Northwestern University	\$37,125
Oberlin College	\$38,280
University of Rhode Island	\$8,678 / \$24,776
Rice University	\$28,996
Rutgers University-New Brunswick	\$11,540 / \$21,488
Smith College	\$36,058
Swarthmore College	\$36,490
Vanderbilt University	\$37,005
Vassar College	\$40,210
University of Washington	\$6,802 / \$23,219
Washington University in St. Louis	\$37,248
Wesleyan University	\$38,634
Williams College	\$37,640
Yale University	\$35,300

 $^{^{\}star} \ \ \textit{Middlebury College does not separate expenses for U.S. News; figure includes tuition/fees and room/board.}$

Today's anything-goes curriculum means students are left unprepared to succeed in the global economy.

Economics has never been more important, but hardly any universities require it.

Despite its importance in a globalized economy, basic economics is required at only two out of the 100 institutions surveyed: the University of Alaska-Fairbanks and the United States Military Academy (West Point). These two institutions show that a truly forward-looking general education program includes both the traditional and the innovative.

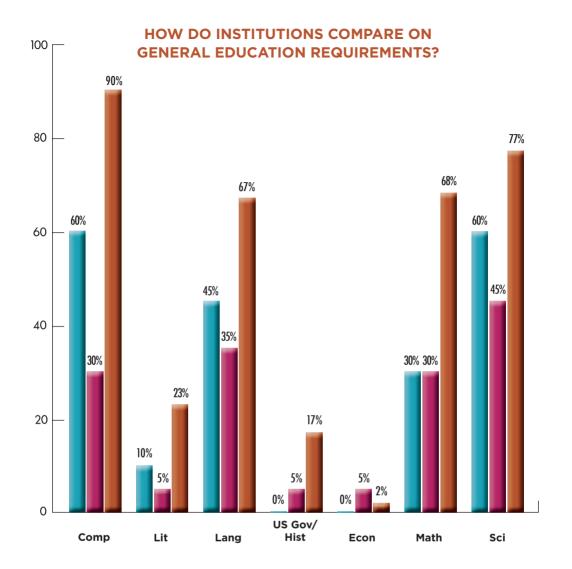
Colleges and universities constantly profess that they seek to construct a curriculum that will address the particular needs of students in the 21st century. It seems logical, then, to include the study of economics—a topic particularly suited to contemporary life—within a core curriculum that also respects the time-honored traditions of the liberal arts.

Informed participation in our democracy requires an understanding of our history and heritage, yet our colleges and universities are not doing their part to foster civic literacy. "Government by the people" requires a shared civic culture and a commitment to democratic self-government. Yet the vast majority of our colleges have made a course on the broad themes of U.S. government or history optional. Colleges and universities—particularly those that are funded by taxpayer dollars—have an obligation to produce informed citizens, but they are, in effect, contributing to America's growing historical amnesia. A mere 11 out of the 100 colleges and universities surveyed require U.S. government or history.

Going forward, colleges and universities should insist that students study America's national history and its democratic political traditions. And faculty should be hired and promoted who can teach these subjects. This is especially important in America, where, as former Harvard dean Harry Lewis notes on WhatWillTheyLearn.com, "Nothing holds us together except our democratic principles. If universities don't pass them down, our children will not inherit our nationhood genetically. They can receive that heritage only through learning. That's one key reason that during the college search you must ask: What will they learn?"

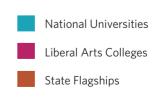
Understanding math and science is essential to survival in the modern world, not to mention global competitiveness, but our colleges and universities are doing little to advance that understanding. The National Survey of America's College Students found that 20 percent of college graduates could not "estimate if their car has enough gasoline to get to the next gas station or calculate the total cost of ordering office supplies." This should be no surprise given the fact that a whopping 70 percent of our top National Universities and Liberal Arts Colleges do not require mathematics. Meanwhile, more than half of the Liberal Arts Colleges and 40 percent of the National Universities surveyed allow students to graduate without any exposure to hard science.

Of course, this ignorance is of more than academic interest; in a rapidly changing world, it also puts us at a serious competitive disadvantage. When done well, a strong general education introduces students to a wide range of subjects in order to whet their appetite for more advanced and specialized work. At a time when policymakers clamor for increased student participation in math and science, the failure of our colleges and universities to insist on exposure in these areas inevitably undermines any efforts to draw more students to these essential subjects.



Total # of 100 Schools Surveyed Requiring Each Core Subject

Composition	72
Literature	17
Foreign Language	56
U.S. Government or History	11
Economics	2
Mathematics	53
Natural or Physical Science	67





COLLEGES MUST SHOW THEY ARE CAPABLE of academic discipline. The diffuse array of courses that now passes as general education is unacceptable if American graduates expect to compete effectively in the global marketplace. Here is how the situation can be remedied.

Colleges and universities must make improving general education an urgent priority. There are ample opportunities to do so. In a recent study, 89 percent of institutions surveyed said they were in the process of modifying or assessing their programs. ²⁴ Boards of trustees, in collaboration with faculty members, should insist on a course of study that will ensure students learn the things they need to know. This means general education curricula characterized by meaningful requirements, satisfied by a select number of courses. At its best, a coherent core reflects, in the words of federal judge José Cabranes, "a series of choices—the choice of the lasting over the ephemeral; the meritorious over the meretricious; the thought-provoking over the merely self-affirming." ²⁵ A general education curriculum, when done well, is one that helps students "ensure that their studies—and their lives—are well-directed." ²⁶

The fact is, without leadership from trustees and administrators, internal campus decision making often results in a fragmented and ineffective curriculum. While curricular change may make some faculty and departments unhappy, it is absolutely critical in giving students the education they need. The State University of New York, led by its Board of Trustees and senior administrators, instituted a strong core curriculum in 2000 and saw its enrollment skyrocket. ACTA's publication, *Restoring a Core*, shows how trustees can advance meaningful general education requirements, working closely with faculty and administrators.

Students and parents should vote with their wallets for those institutions that provide a sound foundation. Ratings similar to those in this study are available at WhatWillTheyLearn.com for additional universities, and this free resource will be updated and expanded continually. While there are many reasons to choose a college, "what they will learn" is surely an essential one. If students and their parents place more emphasis on college quality, rather than reputation, institutions will respond.

Alumni and donors should take an active interest in whether their alma maters have strong general education programs. They should not allow their degrees to be devalued by a decline in standards. While donors cannot and should not dictate curricula, they can direct their gifts—in many instances—to "oases of excellence" that provide interested students with the ability to take courses in areas that are otherwise neglected.

Policymakers should take note of the state of the college curriculum—since it bears directly on institutional performance. While legislators should not dictate what faculty members teach, they can and should ask questions about what the universities they oversee are doing to ensure their students get a good education. Universities do, after all, have a public purpose—preparing the next generation. It is essential that they deliver on this promise.



GENERAL EDUCATION REQUIREMENTS AT TOP 20 NATIONAL UNIVERSITIES*

(in alphabetical order)

INSTITUTION	Comp	Lit	Lang	US Gov	/ Econ	Math	Sci	GRADE
Brown University	Comp		Luiig	11130	Leon	riatii	30.	F
University of California-Berkeley	√							F
Carnegie Mellon University	V					√	$\sqrt{}$	С
University of Chicago	√	$\sqrt{}$				√	V	В
Columbia University	V	$\sqrt{}$	V				√	В
Cornell University			√					F
Dartmouth College	√		√				$\sqrt{}$	С
Duke University	√		√			√	$\sqrt{}$	В
Emory University	√					√	√	С
Harvard University	√						\checkmark	D
Johns Hopkins University								F
Northwestern University			√					F
University of Notre Dame	√		V			√	\checkmark	В
University of Pennsylvania			√				\checkmark	D
Princeton University	√		√				√	С
Rice University								F
Stanford University	√					\checkmark	\checkmark	С
Vanderbilt University							$\sqrt{}$	F
Washington University in St. Louis	V							F
Yale University			V					F

^{*} Top 20 National Universities according to U.S. News & World Report's 2009 college rankings. California Institute of Technology and Massachusetts Institute of Technology are not included in this listing because they are science and engineering schools.

GENERAL EDUCATION REQUIREMENTS AT TOP 20 LIBERAL ARTS COLLEGES*

(in alphabetical order)

INSTITUTION	Comp	Lit	Lang	US Gov Hist	/ Econ	Math	Sci	GRADE
Amherst College								F
Bowdoin College							√	F
Carleton College	V		V					D
Claremont McKenna College	√		√			√	√	В
Colgate University			√					F
Davidson College			V			$\sqrt{}$	$\sqrt{}$	С
Grinnell College								F
Hamilton College								F
Haverford College								F
Middlebury College								F
Oberlin College							√	F
Pomona College			√			√	\checkmark	С
Smith College	√							F
Swarthmore College							\checkmark	F
United States Military Academy	√	$\sqrt{}$		√	√	√	√	Α
Vassar College								F
Washington and Lee University	√		√			√	√	В
Wellesley College	√		√			√	$\sqrt{}$	В
Wesleyan University								F
Williams College								F

^{*} Top 20 Liberal Arts Colleges according to U.S. News & World Report 2009 college rankings. Harvey Mudd College is not included in this listing because it is a science and engineering school.

GENERAL EDUCATION REQUIREMENTS AT 60 STATE FLAGSHIP INSTITUTIONS*

INSTITUTION	Comp	Lit	Lang	US Gov Hist	/ Econ	Math	Sci	GRADE
University of Alabama	√	$\sqrt{}$				√	$\sqrt{}$	В
University of Alaska-Fairbanks	√	√			√	√	√	В
University of Arizona	√		√					D
University of Arkansas	√	$\sqrt{}$	√	V		$\sqrt{}$	$\sqrt{}$	Α
Auburn University	√	√				√	\checkmark	В
University of California-Los Angeles	√		$\sqrt{}$				$\sqrt{}$	С
University of Colorado-Boulder	√		√				\checkmark	С
University of Connecticut	√					√	$\sqrt{}$	С
University of Delaware	√		√			$\sqrt{}$	\checkmark	В
University of Florida	$\sqrt{}$					$\sqrt{}$	$\sqrt{}$	С
University of Georgia	√		√			√	\checkmark	В
University of Hawaii-Manoa	√		√				$\sqrt{}$	С
University of Idaho			√			√	$\sqrt{}$	С
Univ. of Illinois-Urbana-Champaign	√		√					D
Indiana University-Bloomington	√		√					D
University of Iowa	√	$\sqrt{}$	√				$\sqrt{}$	В
Iowa State University	√					√	$\sqrt{}$	С
University of Kansas	√	$\sqrt{}$	√			√	$\sqrt{}$	В
Kansas State University	√		√			√	$\sqrt{}$	В
University of Kentucky	√		√			√		С
Louisiana State University	√		√			√	$\sqrt{}$	В
University of Maine	√					√	$\sqrt{}$	С
University of Maryland	√		√				$\sqrt{}$	С
University of Massachusetts-Amherst	√		$\sqrt{}$				$\sqrt{}$	С

^{*} Major public universities from all 50 states were surveyed to provide geographic as well as institutional depth.

GENERAL EDUCATION REQUIREMENTS AT 60 STATE FLAGSHIP INSTITUTIONS (continued)

INSTITUTION	Comp	Lit	Lang	US Gov Hist	/ Econ	Math	Sci	GRADE
University of Michigan	√		√					D
Michigan State University	√		√			√	√	В
University of Minnesota	√		√			√	\checkmark	В
University of Mississippi	√	$\sqrt{}$	√			√	$\sqrt{}$	В
University of Missouri	√		V			$\sqrt{}$	\checkmark	В
University of Montana	√						$\sqrt{}$	D
University of Nebraska-Lincoln	√		√			√	\checkmark	В
University of Nevada-Las Vegas	√	$\sqrt{}$		√		$\sqrt{}$	$\sqrt{}$	В
University of New Hampshire	√					√		D
University of New Mexico						$\sqrt{}$	$\sqrt{}$	D
City University of NewYork- Brooklyn College	√	√	√	√		V	V	Α
State Univ. of New York-Buffalo	√						$\sqrt{}$	D
State Univ. of New York-Stony Brook	√					√		D
Univ. of North Carolina-Chapel Hill	√		√			√	$\sqrt{}$	В
University of North Dakota	√						$\sqrt{}$	D
Ohio State University	√		√			√	$\sqrt{}$	В
University of Oklahoma	√		√	√		√	$\sqrt{}$	В
Oklahoma State University	√		√	√		√	$\sqrt{}$	В
University of Oregon	√		√					D
Pennsylvania State University			√			√		D
Purdue University	√		√			√	$\sqrt{}$	В
University of Rhode Island	√							F
Rutgers University-New Brunswick	√							F
University of South Carolina	√		$\sqrt{}$	√		√	$\sqrt{}$	В

				US Gov	1/			
INSTITUTION	Comp	Lit	Lang	Hist	Econ	Math	Sci	GRADE
University of South Dakota	√	√				√	\checkmark	В
University of Tennessee	√	√	√			√	$\sqrt{}$	В
University of Texas-Austin	√	V	√	√		√	$\sqrt{}$	Α
Texas A&M University	√	√	√	√		√	$\sqrt{}$	Α
University of Utah	√		√	√		√		В
University of Vermont		$\sqrt{}$				√	$\sqrt{}$	С
University of Virginia	√		√					D
University of Washington	√							F
West Virginia University	√		√			√	$\sqrt{}$	В
College of William and Mary			√			√	$\sqrt{}$	С
University of Wisconsin			√				$\sqrt{}$	D
University of Wyoming	√			√		√	$\sqrt{}$	В



APPFNDIX

Below we explain, as applicable, why we did not count as core subjects certain courses that might appear, at first glance, to meet core requirements. Where possible, we also take note of institutions that set a high standard or offer a noteworthy curricular model. The colleges are listed alphabetically.

University of Alabama: No credit given for Foreign Language because students are given a choice between a two-semester foreign language option or a computer literacy option.

University of Alaska-Fairbanks: No credit given for Foreign Language because BA students are given the choice between completing an intermediate language or completing a minor. No credit given for U.S. Government or History because the history course required for the Perspectives on the Human Condition requirement is not a U.S. survey.

University of Arizona: No credit given for Mathematics because the Foundations Mathematics requirement may be fulfilled with a course in linguistics, a critical thinking course in the philosophy department, or by "Mathematics in Modern Society," a course that uses high school-level math. No credit given for Natural or Physical Science because students may take narrow courses or courses with little science content to fulfill the Natural Sciences requirement.

University of Arkansas: Notably requires students to take a history course on Western Civilization in addition to the State requirement of studying American history.

Auburn University: No credit given for Foreign Language because study past the elementary level is not required. No credit given for U.S. Government or History because the qualifying courses for the History requirement, though commendable, are world history courses rather than U.S. surveys.

Bowdoin College: No credit given for Composition because the First-Year Seminars do not focus exclusively on writing. No credit given for Mathematics because students may use science or economics courses to satisfy the Mathematical, Computational, or Statistical Reasoning distribution requirement. Students may also avoid mathematics because it is folded into the Natural Sciences and Mathematics division requirement.

University of California-Berkeley: No credit given for Foreign Language because only second-semester competency is required. No credit given for U.S. Government or History because the American History and Institutions requirement may be satisfied by high school coursework or narrow courses. No credit given for Mathematics because students can test out of the Quantitative Reasoning requirement through SAT scores. No credit given for Natural or Physical Science because such courses as "Wildland Fire Science" may satisfy the Physical Science requirement, and "Fitness for Life: Physical Adaptations to Exercise" may fulfill the Biological Science requirement.

University of California-Los Angeles: No credit given for U.S. Government or History because the American History and Institutions requirement may be satisfied by high school coursework or by courses narrow in scope. No credit given for Mathematics because SAT scores may exempt students from the Quantitative Reasoning requirement.

Carleton College: No credit given for Mathematics or Natural or Physical Science because the two subjects are folded into the Mathematics and Natural Sciences requirement, thus students may elect one and not the other.

Carnegie Mellon University: No credit given for Foreign Language because the Communicating: Language and Interpretations requirement allows students to choose between intermediate language proficiency or such courses as "Introduction to Performance Theory" or "Major Works of Modern Poetry." No credit given for U.S. Government or History because the required history course, "Introduction to World History," is not a U.S. survey.

University of Chicago: No credit given for Foreign Language because only one year at the college level is required. No credit given for U.S. Government or History because the Civilization Studies sequences are not necessarily focused on American history. Chicago notably does offer excellent Humanities sequences and Civilization Studies sequences, which introduce students to a wide range of classic and modern texts.

Claremont McKenna College: No credit given for Literature because the required "Literature 10" course is an English composition course rather than a literature course. Furthermore, Literature may be avoided altogether since it is one of a grouping of four subjects of which students must choose two. No credit given for U.S. Government or History or Economics because the two subjects are part of a Social Sciences requirement that consists of four courses of which students only choose three; either subject may be avoided.

Colgate University: No credit given for Composition because only students with low standardized test scores are required to take a composition class. No credit given for Mathematics because the Natural Sciences and Mathematics distribution requirement may be satisfied by only science courses. No credit given for Natural or Physical Science because the Scientific Perspectives on the World core area requirement may be fulfilled with such courses as "Sport and the Scientific Method" or "The Science of Art."

University of Colorado-Boulder: No credit given for U.S. Government or History because the Historical Context and United States Context requirements may be satisfied by courses narrow in scope. No credit given for Mathematics because students may fulfill the Quantitative Reasoning and Mathematical Skills requirement with courses of minimal college-level math content such as "Mathematics From the Visual Arts."

Columbia University: No credit given for Mathematics because math courses are part of the Science course list but are not required. The Core Curriculum, however, offers students an integrated and rich curriculum.

University of Connecticut: No credit given for Foreign Language because students are not required to go beyond elementary competency.

Cornell University: No credit given for Composition because the First-Year Writing Seminars are topic courses in a range of disciplines. No credit given for Mathematics because the Mathematics and Quantitative Reasoning requirement may be satisfied by courses of little college-level math such as "Mathematical Explorations" and "Evaluating Statistical Evidence," a course in the sociology department noted in its description as "not a math class per se." No credit given for Natural or Physical Science because the Physical and Biological Sciences requirement may be satisfied by courses with little science content such as "The

Language of Chemistry" and "Why the Sky is Blue: Aspects of the Physical World."

Dartmouth College: No credit given for Literature as the Literature requirement may be fulfilled with niche courses such as "Bob Dylan" or "The Graphic Novel"—a course about comic books. No credit given for Mathematics because courses in linguistics may satisfy the Quantitative and Deductive Sciences requirement.

Davidson College: No credit given for Composition because required writing seminars are topic courses in a range of disciplines. No credit given for Literature because students may use such courses as "Young Adult Literature" to fulfill the Literature distribution requirement. No credit given for U.S. Government or History because the History requirement may be satisfied by courses narrow in scope.

Emory University: No credit given for U.S. Government or History because the History, Society, Cultures requirement may be satisfied by courses narrow in scope.

University of Florida: No credit given for Foreign Language because only one year of a language is required.

University of Georgia: No credit given for Literature because students may take courses narrow in scope to satisfy the Literature requirement. No credit given for U.S. Government or History because students may test out by taking an exam in U.S. history or may fulfill the requirement by taking narrow courses such as "United States Relations with Northeast Asia."

Grinnell College: No credit given for Composition because the First-Year Tutorials are not expressly writing courses. Apart from those tutorials, there are no formal general education requirements.

Hamilton College: No credit given for Composition because writing-intensive courses offered in a range of departments may satisfy the Writing Program requirements. No credit given for Mathematics because the Quantitative Literacy requirement may be fulfilled either by passing an exam during orientation week or by taking such courses as "Principles of Archaeology," "Biology: Fundamentals and Frontiers," or "Introductory Psychology."

Harvard University: No credit given for Foreign Language because only one year of a language is required. No credit given for U.S. Government or History because the United States in the World requirement is made up of niche courses. No credit given for Mathematics because courses with little college-level math content—such as "Fat Chance," a course billed in its description as "not mathematically demanding"—may be used to fulfill the Empirical and Mathematical Reasoning requirement.

Haverford College: No credit given for Composition because the writing seminars are either "discipline-based," "topic-based," or "individualized" and offered in a range of departments. No credit given for Foreign Language because only one year of language study is required. No credit given for Mathematics because the Quantitative requirement may be met with science courses or a class called "Fluency with Information Technology." No credit given for Natural or Physical Science because students may take mathematics courses or courses with limited scientific content to satisfy the Natural Science requirement.

University of Hawaii-Manoa: No credit given for Mathematics because the Symbolic Reasoning requirement may be satisfied by "Math for Elementary Teachers II," a course that does not involve college-level math.

University of Idaho: No credit given for Composition because students can test out of the entire Written English requirement through SAT or ACT scores.

University of Illinois-Urbana-Champaign: No credit given for Mathematics because such courses as "Principles and Techniques in Music Education" and "Introduction to Epidemiology" may satisfy the Quantitative Reasoning requirement. No credit given for Natural or Physical Science because such courses as "How Things Work" and "Human Reproduction and Society" may fulfill the Natural Sciences and Technology requirement.

Indiana University-Bloomington: No credit given for Mathematics or Natural or Physical Science because the Natural and Mathematical Sciences are part of a single distribution category, so students may elect one and not the other.

University of Iowa: No credit given for Mathematics because courses with little math content such as "Theory and Practice of Argument," "Principles of Reasoning," or "Language and Formal Reasoning" may satisfy the Quantitative or Formal Reasoning requirement.

Iowa State University: No credit given for Foreign Language because only one year of language study is required.

Johns Hopkins University: No credit given for Composition because only writing-intensive topic courses in a range of disciplines are required. No credit given for Foreign Language because not all departments in Arts and Sciences require intermediate level language study. No credit given for Mathematics or Natural or Physical Science because humanities and social science majors are allowed to choose any 12 credits in the Quantitative, Natural Science, and Engineering academic areas.

University of Kansas: No credit given for U.S. Government or History because the Historical Studies requirement does not specifically require the study of U.S. history.

Kansas State University: No credit given for U.S. Government or History, because, while the Western Heritage requirement has some solid offerings, students may fulfill the requirement with narrow topical courses.

University of Kentucky: No credit given for Natural or Physical Science because the Natural Sciences requirement may be satisfied by courses from anthropology, political science, and psychology; and the College Laboratory or Field Work Experience requirement includes courses from the social sciences.

University of Maryland: No credit given for Literature because the Literature portion of the Humanities and Arts requirement may be fulfilled with courses narrow in scope. No credit given for Mathematics because the Fundamental Studies Mathematics requirement may be satisfied by the SAT, and the Mathematics and Formal Reasoning Distributive Studies requirement may be satisfied by such courses as "Philosophy and Computers" and "Maps and Map Use."

University of Massachusetts-Amherst: No credit given for Mathematics because the Basic Math Skills requirement may be satisfied by high school-level math, and such courses as "Introduction to Linguistic Theory" and "Problem Solving with the Internet" may fulfill the Analytical Reasoning requirement.

University of Michigan: No credit given for Mathematics because students may use science courses to fulfill the Quantitative Reasoning requirement. No credit given for Natural or Physical Science because such courses as "Biology

for Nonscientists" and "Physics of Music" may satisfy the Natural Science distribution requirement.

Michigan State University: In recent years, MSU notably raised standards so that only college-level mathematics courses satisfy the Quantitative Reasoning requirement.

Middlebury College: No credit given for Composition because both sections of the First-Year Writing Seminar requirement may be satisfied by topic courses in a range of disciplines. No credit given for Foreign Language because it is one of eight academic categories of which students are only required to fill seven. No credit given for U.S. Government or History because the Cultures and Civilizations of Northern America section of the Cultures and Civilizations requirement may be fulfilled with courses narrow in scope or about Canada. No credit given for Literature because the Literature academic category may be satisfied by narrow or niche courses. No credit given for Mathematics because the Deductive Reasoning and Analytical Processes academic category may be fulfilled with science courses. No credit given for Natural or Physical Science because the Physical and Life Sciences academic category may be satisfied by courses with little science content.

University of Minnesota: No credit given for U.S. Government or History because the Historical Perspectives requirement may be fulfilled with courses narrow in scope.

University of Mississippi: No credit given for U.S. Government or History because an American government or history survey is not required. However, students are encouraged to fulfill the History requirement with a two-semester Western Civilization survey.

University of Missouri: No credit given for U.S. Government or History because even though the State of Missouri has a Constitutions requirement, students may fulfill it by taking a course in Missouri history or U.S. history courses covering a narrow chronological period.

University of Montana: No credit given for Foreign Language because students are given a choice between studying a language or taking a Symbolic Systems class. No credit given for Mathematics because courses with little collegelevel math content such as "Contemporary Mathematics" ("an introduction to mathematical ideas and their impact on society") may fulfill the Mathematical Literacy requirement.

University of Nevada-Las Vegas: No credit given for Foreign Language because students have a choice between studying one year of a foreign language or studying a foreign culture.

University of New Hampshire: No credit given for Foreign Language because only one year at the college level is required for BA students. No credit given for Natural or Physical Science because such courses as "Stressed Out" and "Everyone Needs a Place to Live" may satisfy the Biological Science, Physical Science, or Technology requirements.

University of New Mexico: No credit given for Composition because students may test out of the University Writing requirement and fulfill the Writing and Speaking core requirement with a course in public speaking. No credit given for Foreign Language because intermediate level is not required.

State University of New York-Buffalo: No credit given for Foreign Language because only proficiency through the second semester is required. No credit given for U.S. Government or History because the American Pluralism requirement may be satisfied by narrow courses. No credit given for Mathematics because the Mathematical Sciences requirement may be fulfilled with sociology, psychology, and management courses.

State University of New York-Stony Brook: No credit given for Literature because the Interpreting Texts in the Humanities requirement does not require a literature survey course. No credit given for Foreign Language because only two semesters of a foreign language are required. No credit given for U.S. Government or History because the American History Competence requirement may be fulfilled with narrow courses such as "History of Popular Culture." No credit given for Natural or Physical Science because such courses as "Physics of Sports," "How Science Works," or "Long Island Sound: Science and Use" may satisfy the Natural Sciences requirement.

University of North Dakota: No credit given for Foreign Language because only certain majors in the college of Arts and Sciences require a language. No credit given for Mathematics because it is only an option in the Mathematics, Science and Technology general education requirement.

Northwestern University: No credit given for Composition because the program evaluates students through freshman seminars offered in a range of disciplines rather than specific writing classes. Students are only required to take writing

if their performance in these seminars is unsatisfactory. No credit given for Mathematics because the Formal Studies requirement may be fulfilled with courses on Slavic linguistics and music theory. No credit given for Natural or Physical Science because the Natural Sciences requirement may be satisfied by courses in anthropology, geography, linguistics, and psychology.

University of Notre Dame: No credit given for Literature because such courses as "Migration and Identity" and "Representing Labor" may satisfy the Literature requirement. No credit given for U.S. Government or History because a broad course in American government or history is not required to satisfy the History requirement.

Oberlin College: No credit given for Composition because the Writing-Intensive and Writing-Certification courses are topic courses in a range of disciplines. No credit given for Foreign Languages because students are encouraged but not required to attain proficiency in a foreign language. No credit given for Mathematics because such courses as "Introductory Astronomy," "Feeding the World," and "Glaciology, Ice Ages, and Climate Change" may satisfy the Quantitative Proficiency requirement.

University of Oregon: No credit given for U.S. Government or History because the courses for the American Cultures requirement are narrow in scope. No credit given for Mathematics because BA students are not required to take a math class. No credit given for Natural or Physical Science because math courses or courses with little science content may satisfy the Science requirement.

University of Pennsylvania: No credit given for Composition because the writing seminars are topic courses in a range of disciplines. No credit given for U.S. Government or History because the History and Tradition requirement may be satisfied by a wide range of courses not specifically focused on American history and often narrow in scope. No credit given for Mathematics because the Formal Reasoning and Analysis requirement, the Natural Sciences and Mathematics requirement, and the Quantitative Data Analysis requirement may all be satisfied by courses with little math content.

Pennsylvania State University: No credit given for Composition because the Writing and Speaking Skills requirement may be fulfilled with courses on public speaking. As of 2005, all BA students are required to take the intermediate level of a Foreign Language. No credit given for U.S. Government or History because the United States Cultures courses are too narrow to count as American history

surveys. No credit given for Natural or Physical Science because the Natural Sciences requirement may be fulfilled with narrow courses or courses with little scientific content.

Pomona College: No credit given for Composition because writing is one aspect of the "Critical Inquiry Seminars" but not the focus.

Princeton University: No credit given for U.S. Government or History or Literature because narrow and trendy courses may satisfy the Historical Analysis and Literature and the Arts distribution requirements. No credit given for Mathematics because science courses or courses with little math content may satisfy the Quantitative Reasoning requirement.

Purdue University: The United States Traditions requirement mandates that students choose one course from a list of solid offerings in U.S. history, government, and literature. However, no credit is given for Literature or U.S. Government or History because students may choose one and not the other.

University of Rhode Island: No credit given for Composition because students may test out of one part of the English Communication requirement and may satisfy the remainder with courses that involve little college-level writing. No credit given for Literature because the Fine Arts and Literature requirement may be fulfilled with courses in music and theater. No credit given for Foreign Language because students may fulfill the requirement with elementary-level study. No credit given for Mathematics because such courses as "Politics and Mathematics" (a course that studies the "elementary mathematical treatments of voting systems") may satisfy the Mathematical and Quantitative Reasoning requirement. No credit given for Natural or Physical Science because such courses as "Floral Art" (a class on the theory of flower and plant arrangement) may fulfill the requirement for Natural Sciences.

Rice University: No credit given for Composition because the writing requirement consists of a university-administered composition examination, and only those students who do not receive a satisfactory score must take a writing course. No credit given for any of the other subjects because students may choose from among many narrow courses in several broad distribution groups.

Rutgers University-New Brunswick: No credit given for Foreign Language because the School of Arts and Sciences only requires one year of a language. No credit given for Mathematics because courses with little math content such

as "Topics in Mathematics for the Liberal Arts" may satisfy the first part of the Quantitative Reasoning distribution requirement. The second part of the requirement may be fulfilled with courses in criminal justice and linguistics. No credit given for Natural or Physical Science because such courses as "Genetics, Law, and Social Policy" and "Human Sexuality" may satisfy the Natural Sciences requirement.

University of South Dakota: No credit given for Foreign Language because no more than one year of a foreign language is required.

Stanford University: No credit given for Foreign Language because only one year at the college level is required. No credit given for U.S. Government or History because the American Cultures requirement may be fulfilled with narrow courses such as "Visions of the 1960s" and "Ki ho'alu: The New Renaissance of a Hawaiian Musical Tradition." Stanford does offer students an optional great books curriculum called Structured Liberal Education.

Swarthmore College: No credit given for Composition because the Writing courses and seminars are topic courses in a range of disciplines. No credit given for Foreign Language because students may fulfill the requirement with one year of a beginning foreign language. No credit given for Mathematics because it is not required for all students.

University of Tennessee: No credit given for U.S. Government or History because the United States Studies distribution requirement may be satisfied by a wide range of courses in many departments.

United States Military Academy: No credit given for Foreign Language because students may use an introductory sequence to fulfill the language requirement.

University of Utah: No credit given for Natural or Physical Science because such courses as "Drug Theory Policy Practice" and "Topics: History of Math" may count for the Physical, Life, and Applied Sciences requirement.

Vanderbilt University: No credit given for Composition because only students with low SAT writing scores need to take an introductory composition course. The remainder of the writing requirement may be fulfilled with topic courses in a range of disciplines or an oral communications course. No credit given for Foreign Language because students are only expected to demonstrate proficiency at the second semester level. No credit given for U.S. Government or History

because a wide range of courses, often narrow in scope, may satisfy the History and Culture of the United States requirement. No credit given for Mathematics because students may take all science classes for the Mathematics and Natural Sciences category.

Vassar College: No credit given for Composition because the Freshman Writing Seminars are topic courses in a range of disciplines. No credit given for Foreign Language because only one year of study is required. No credit given for Mathematics because the Quantitative requirement may be fulfilled with courses in the sciences.

University of Vermont: No credit given for Composition because there is no university-wide writing requirement. No credit given for Foreign Language because only one year of study is required.

University of Virginia: No credit given for Literature because it is one of three categories of a Humanities requirement where students need only choose two. No credit given for U.S. Government or History because the courses satisfying the Historical Studies requirement are not U.S. survey courses. No credit given for Mathematics or Natural or Physical Science because math and science are folded into the Natural Science and Mathematics category; students may avoid one or the other.

University of Washington: No credit given for Foreign Language because only one year of study is required. No credit given for Mathematics or Natural or Physical Science because the Quantitative and Symbolic Reasoning requirement may be fulfilled with science courses, and The Natural World requirement may be satisfied by math courses.

Washington and Lee University: No credit given for Literature because students may take narrow sociology and environmental courses to satisfy the requirement. No credit given for U.S. Government or History because the History requirement may be satisfied by a wide range of courses that do not necessarily focus on American history. No credit given for Economics because Economics is one of four areas in the Social Sciences requirement where students need only select two.

Washington University in St. Louis: No credit given for Literature or U.S. Government or History because the Textual and Historical Studies requirement may be satisfied by history, literature, philosophy, and religion courses. No credit

given for Mathematics because the Quantitative Analysis requirement may be fulfilled with science courses. No credit given for Natural or Physical Science because the Natural Sciences and Mathematics area requirement folds math and science into one category, and a wide range of courses in several fields including education, anthropology, public health, and urban studies may satisfy the requirement. The university does have a noteworthy, optional, two-year Text and Tradition program that is both coherent and rich in content.

Wesleyan University: No credit given for Composition because although Writing is listed as one of the "Essential Capabilities," there is no specific writing class that students are required to take. No credit given for Mathematics or Natural or Physical Science because the two subjects are folded into the Natural Sciences and Mathematics section of the general education requirements, and courses of little science or math content such as "The Psychology of Reading" and "Physics for Future Presidents" may satisfy the requirement.

West Virginia University: No credit given for U.S. Government or History because the courses satisfying the American Cultures requirement are narrow in scope.

College of William and Mary: No credit given for Composition because the lower division writing requirement may be satisfied by writing seminars that are topic courses in a range of disciplines. No credit given for U.S. Government or History because the World Cultures and History requirement may be satisfied by courses other than American history.

Williams College: No credit given for Composition because the writing-intensive courses are topic courses in a range of disciplines. No credit given for Foreign Language because foreign languages are an option within the Languages and the Arts Divisional Requirement. No credit given for Mathematics because the Quantitative/Formal Reasoning requirement may be fulfilled with a wide array of courses in biology, chemistry, economics, and environmental science. No credit given for Natural or Physical Science because the Science and Mathematics Divisional Requirement may be satisfied by such courses as "The Tropics: Biology and Social Issues" and "Exploring Creativity."

University of Wisconsin: No credit given for Composition because the Communication A requirement may be satisfied by speech courses, and the Communication B requirement may be fulfilled with courses in anthropology,

biology, and music. No credit given for Mathematics because such courses as "Reason in Communication" may satisfy the Quantitative Reasoning A requirement, while courses in astronomy, botany, and zoology may fulfill the Quantitative Reasoning B requirement.

University of Wyoming: No credit given for Foreign Language because study past the elementary level is not required.

Yale University: No credit given for Composition because the Writing skills requirement may be satisfied by over 150 courses spanning 25 different departments. No credit given for Mathematics because the Quantitative Reasoning requirement may be fulfilled with courses in economics, environmental studies, and physical science. No credit given for Natural or Physical Science because such courses as "Chemistry in Popular Novels" and "Search for Extraterrestrial Life" may satisfy the Science requirement. The Directed Studies initiative, an optional program open only to selected students, notably offers an integrated study of great books and ideas.

END NOTES

- 1. Lois Romano, "Literacy of College Graduates Is on Decline," *The Washington Post*, 25 December 2005, http://www.washingtonpost.com/wp-dyn/content/article/2005/12/24/AR2005122400701.html?sub=AR.
- "Most Young People Entering the U.S. Workforce Lack Critical Skills Essential for Success," Partnership for 21st Century Skills, 2 October 2006, http://www.21stcenturyskills.org/index.php?option=com_content&task=view&id=250&Itemid=64.
- Intercollegiate Studies Institute American Civic Literacy Program, "Our Fading Heritage: Americans Fail a Basic Test on Their History and Institutions," Intercollegiate Studies Institute, http://www.americancivicliteracy.org/2008/summary_summary.html; American Council of Trustees and Alumni, Losing America's Memory: Historical Illiteracy in the 21st Century, 2000.
- 4. "National Endowment for the Arts Announces New Reading Study," National Endowment for the Arts, 19 November 2007, http://www.nea.gov/news/news07/TRNR.html.
- 5. Judy J. Anderson, ed., *Undergraduate Bulletin 2008–09: University of Nebraska Lincoln* (Lincoln: Office of Publications & Photography, 2008), 16, 399, 404, http://www.unl.edu/unlpub/undergrad/downloads/ugb0809.pdf; "Course Information Suite: General Education Requirements," University of Illinois at Urbana-Champaign, http://courses.illinois.edu/cis/gened/HUM.html?skinId=2169; "University of New Hampshire Undergraduate Catalog," University of New Hampshire, http://www.unh.edu/undergrad-catalog/gi.cfm?thisid=97&masterid=96&headingid=27#97; Office of the Registrar, "English," Dartmouth, http://www.dartmouth.edu/~reg/courses/desc2007/engl.html; "The University of Rhode Island: 2008-09 Catalog," The University of Rhode Island, http://www.uri.edu/catalog/catalogpdf/index.html.
- Trends and Emerging Practices in General Education Based on a Survey Among Members Of The Association of American Colleges and Universities (Washington, DC: Hart Research Associates, 2009), 8, http://www.aacu.org/membership/ documents/2009MemberSurvey_Part2.pdf.
- 7. "College of Arts and Sciences (College) 2006-2008 Academic Bulletin," Indiana University, http://www.indiana.edu/~bulletin/iub/coas/2006-2008/degree.shtml.
- 8. "New General Education Requirements for the Class of 2000 and Beyond," Princeton University, http://www.princeton.edu/pr/pub/gen/04.htm.
- 9. "2009 -10 General Catalog," The University of Arizona, http://catalog.arizona.edu/2009-10/gened.html.

- 10. "The University of Rhode Island 2008-09 Catalog," The University of Rhode Island, http://www.uri.edu/catalog/cataloghtml/ugraduateprogrequir.html.
- 11. Are They Really Ready to Work? Employers' Perspectives on the Basic Knowledge and Applied Skills of New Entrants to the 21st Century U.S. Workforce (The Conference Board, Corporate Voices for Working Families, The Partnership for 21st Century Skills, and The Society for Human Resource Management 2006), 18-19.
- 12. Ibid, 34.
- 13. Bureau of Labor Statistics, "Number of Jobs, Labor Market Experience, and Earnings Growth: Results from a National Longitudinal Survey News Release," United States Department of Labor, 27 June 2008, http://www.bls.gov/news.release/nlsoy.htm.
- 14. "The Core Curriculum," Columbia College Columbia University in the City of New York, http://www.college.columbia.edu/core.
- 15. "The Core Curriculum," Columbia College Columbia University in the City of New York, http://www.college.columbia.edu/core; "The Common Core," The University of Chicago, https://collegeadmissions.uchicago.edu/academics/commoncore.shtml.
- 16. Excluding Massachusetts Institute of Technology and California Institute of Technology from the National Universities List and Harvey Mudd College from the Liberal Arts list as they are science and engineering schools that do not focus on the liberal arts and sciences and therefore are not expected to have a core curriculum.
- 17. "Williams College Mission," Williams College, http://www.williams.edu/home/mission/; "Courses of Instruction 2009-2010," Williams College, http://www.williams.edu/admin/registrar/catalog/info0910.pdf; "Amherst's Philosophy," Amherst College, https://www.amherst.edu/aboutamherst/philosophy; Elizabeth J. Rolander, ed., *Amherst College 2008-09 Catalog (Amherst: Amherst College, 2008), 69-71, https://www.amherst.edu/media/view/71658/original/Section%2B4.pdf.
- 18. "Major Declaration for Transfer Juniors at Wesleyan," Wesleyan University, http://frontpage.wesleyan.edu/deans/tevnewstudent/Jr%20transf%20major%20declaration%20info.pdf; "General Education Expectations 2009-2010," Wesleyan University, https://iasext.wesleyan.edu/regprod/!wesmaps_page.html?gened_list=&term=1099.
- 19. Office of the University Registrar, "University General Education Requirements (GERs)," Stanford University, http://www.stanford.edu/dept/registrar/students/courses/GER.htm; Registrar's Office, "Stanford Bulletin: Undergraduate Courses in Music," Stanford University, http://registrar.stanford.edu/bulletin_past/bulletin05-06/pdf/music.pdf.

- 20. Weinberg College of Arts and Sciences, "Approved Distribution Courses 2008–2009: Area II Formal Studies," Northwestern University, http://www.wcas.northwestern.edu/advising/degree/distrocourses/documents/Area_II_2008-09.pdf.
- 21. "Courses of Study: 2009-2010: Course Description," Cornell University, http://courses.cuinfo.cornell.edu/CoSdetail.php?college=AS&number=3930&prefix=AMST&title=International+Film+of+the+1970s+(also+COML%2FFILM%2FVISST+3930)+(LA-AS); "Courses of Study: 2009-2010: Course Description," Cornell University, http://courses.cuinfo.cornell.edu/CoSdetail.php?college=AS&number=3530&prefix=DANCE&title=Music+and+Choreography+(also+MUSIC+4512)+(LA-AS).
- 22. Charlie Alison, ed., *Volume 103, University of Arkansas Catalogs June 2009* (Fayetteville: University Relations, 2009), 39-41, http://catalogofstudies.uark.edu/0910-UG-CatalogofStudies-Final.pdf.
- 23. "New Study of the Literacy of College Students Finds Some Are Graduating with Only Basic Skills," American Institutes for Research, 19 January 2006, http://www.air.org/news/documents/Release200601pew.htm.
- 24. Trends and Emerging Practices in General Education Based on a Survey Among Members Of The Association of American Colleges and Universities (Washington, DC: Hart Research Associates, 2009), 8, http://www.aacu.org/membership/ documents/2009MemberSurvey_Part2.pdf.
- 25. Institute for Effective Governance, Fostering Judgment: Sixty Years of Well-Directed Studies, 2006, 4.
- 26. Ibid.

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