



# THE LEAP CHALLENGE

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Education for a World  
of Unscripted Problems



SINCE 1915

# Liberal Education: Preparing Students for Complexity and Change

*Liberal education* prepares students to understand and manage complexity, diversity, and change. Students who experience an engaged liberal education gain broad knowledge (e.g., of science, culture, and society) and in-depth knowledge in a specific area of interest. They develop high-level transferable skills, including communication, evidence-based reasoning, and problem solving, as well as proficiencies particular to their fields.

Perhaps most importantly, liberally educated students learn how to apply knowledge and skills in real-world settings. They develop a sense of social responsibility so they can contribute with integrity to their workplaces and to their communities, large and small.

Over the years, the goals of liberal education have endured even as the courses and requirements that define such an education have changed. As in past periods of societal change, new forms of liberal education are emerging today—approaches that recognize the value of focusing more explicitly on specific twenty-first-century learning outcomes, and integrating high-impact educational practices while also requiring in-depth study.

As it marks its Centennial, the Association of American Colleges and Universities (AAC&U) introduces the LEAP Challenge. The LEAP Challenge is to make Signature Work a goal for *all* students—and the expected standard of quality learning in college. To learn more about the background to the LEAP Initiative, see pages 7–9.

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“Employers do not want...  
students prepared for narrow  
workforce specialties. ...  
Virtually all occupational  
endeavors require a working  
appreciation of the historical,  
cultural, ethical, and global  
environments that surround  
application of skilled work.”

— *Roberts T. Jones*  
*President,*  
*Education Workforce Policy, LLC*

# The LEAP Challenge:

## Signature Work for All Students

The LEAP Challenge invites colleges and universities to make Signature Work a goal for all students—and the expected standard of quality learning in college.

### WHAT IS SIGNATURE WORK?

In Signature Work, a student uses his or her cumulative learning to pursue a significant project related to a problem she or he defines. In the project conducted throughout at least one semester, the student takes the lead and produces work that expresses insights and learning gained from the inquiry and demonstrates the skills and knowledge she or he has acquired. Faculty and mentors provide support and guidance.

Signature Work might be pursued in a capstone course or in research conducted across thematically linked courses, or in another field-based activity or internship. It might include practicums, community service, or other experiential learning. It always should include substantial writing, multiple kinds of reflection on learning, and visible results. Many students may choose to use e-portfolios to display their Signature Work products and learning outcomes.

### SIGNATURE WORK'S ESSENTIAL ROLE

A twenty-first-century education prepares students to work with unscripted problems. Today's graduates will participate in an economy fueled by successful innovation—and engage with diverse communities that urgently need solutions to intractable problems. Our graduates will have to secure environmental sustainability, find ways to maintain human dignity and equity in an increasingly polarized nation, and manage a world rife with conflict. They will need to balance family and career in a climate that increasingly devalues personal privacy and presents obstacles to flourishing.

Negotiating this world demands an education that explores issues from multiple perspectives and across disciplines—and that helps students apply what they learn to real-world situations. Signature Work is a powerful way to help students integrate various elements of their education and apply their learning in meaningful ways.

“I learned the absolute most from my research project...with the professor as well as [from] my capstone experience because both of those fostered independent learning.”

— *Student participant in LEAP focus group*

# Understanding Signature Work

## TAPPING MOTIVATION

In Signature Work, each student addresses one or more problems that matter to the student and to society. A problem may be related to a contemporary issue that needs a practical solution, or to an enduring concept, such as freedom, integrity, or justice.

Through Signature Work, students immerse themselves in exploration, choosing the questions they want to study and preparing to explain the significance of their work to others. This process helps students develop the capacities—e.g., investigation, evidence-based reasoning, and the ability to collaborate constructively—to grapple with problems where the “right answer” is still unknown and where any answer may be actively contested.

Of course, colleges can and should assess a student’s Signature Work for evidence of his or her proficiency on key learning outcomes. But the value of Signature Work goes far beyond assessment. It taps students’ own motivations, kindling imagination and providing opportunities for in-depth learning that go well beyond the traditional compilation of course credits, grades, and credentials.

“The premium on lifelong learning just keeps going up...and the importance of static knowledge is going down. ...Students have to have knowledge and know how to use it. ... All learning should revolve around projects.”

— David Rattray, Executive Vice President, Education and Workforce Development, Los Angeles Area Chamber of Commerce

Signature Work also plays a central role in preparing students to navigate through ongoing and often disruptive change. The world is evolving quickly. And in today’s economy, graduates are likely to move to new jobs, or even new careers, multiple times. These transitions will require new skills or even personal reinvention. More than ever before, students’ ability to tap their own inner resources—their sense of purpose, ethical compass, and resilience—will be important components of success in work and life.

## BUILDING SKILLS EMPLOYERS REQUIRE

Signature Work can help every student get more out of higher education—and be better prepared for work and life. It helps students integrate their major area of study with other disciplines and apply all they have learned to real-world situations.

Signature Work also builds the skills employers most value: 91 percent of employers say that critical thinking, communication, and problem-solving abilities are *more important* than a potential employee’s undergraduate major. Nearly all employers surveyed (90 percent) give hiring preference to college graduates with skills that enable them to contribute to innovation in the workplace.\*

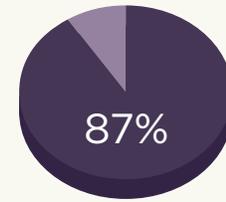
## SIGNATURE WORK IN ACTION

Signature Work is underway at colleges and universities across the country. The names and approaches differ, but the concept of students taking the lead on complex learning is the same. Selected examples include

- The Integrated Concentration in Science (iCons) at the **University of Massachusetts Amherst (MA)** is a set of interdisciplinary, problem-based courses for students majoring in fields across the sciences, engineering, and public health. Students take one course each of their first three years and complete a yearlong independent research project during their senior year. iCons courses use a case study model, with case studies focused on the evolving role of science in addressing unsolved social or health problems.
- **LaGuardia Community College (NY)** engages students with learning communities anchored by development of individual electronic portfolios. Students use the e-portfolios to display their best work as well as to track and reflect on their own progress in achieving their academic, work, and life goals. LaGuardia's curricular pathways also provide opportunities to engage with and apply learning in the diverse neighborhoods surrounding the college.
- **The College of Wooster (OH)** requires every student to complete an in-depth senior research project called Independent Study. The entire curriculum builds students' capacity for this project, so by senior year, students are able to research effectively.
- **Cornell University (NY)** recently announced the launch of Engaged Cornell, an effort to make community engagement a hallmark of its undergraduate program. Over the next 10 years, across all its colleges, Cornell aims to expand curricula that incorporate learning experiences in communities, guided by a set of cross-disciplinary learning outcomes and good practices for community partnerships. By 2025, the initiative aims to provide opportunity for every student to participate in community-engagement, at home or around the world.

## SIGNATURE WORK, PROFESSIONAL SUCCESS AND FLOURISHING

### EMPLOYERS VALUE PROJECT-BASED LEARNING



Percentage of employers who say they would be more likely to consider hiring a candidate if she or he had completed an advanced, comprehensive senior project.

\*Hart Research Associates. *Falling Short? College Learning and Career Success* (AAC&U, 2015).

### EXPERIENCES THAT LEAD TO FLOURISHING

2.4x

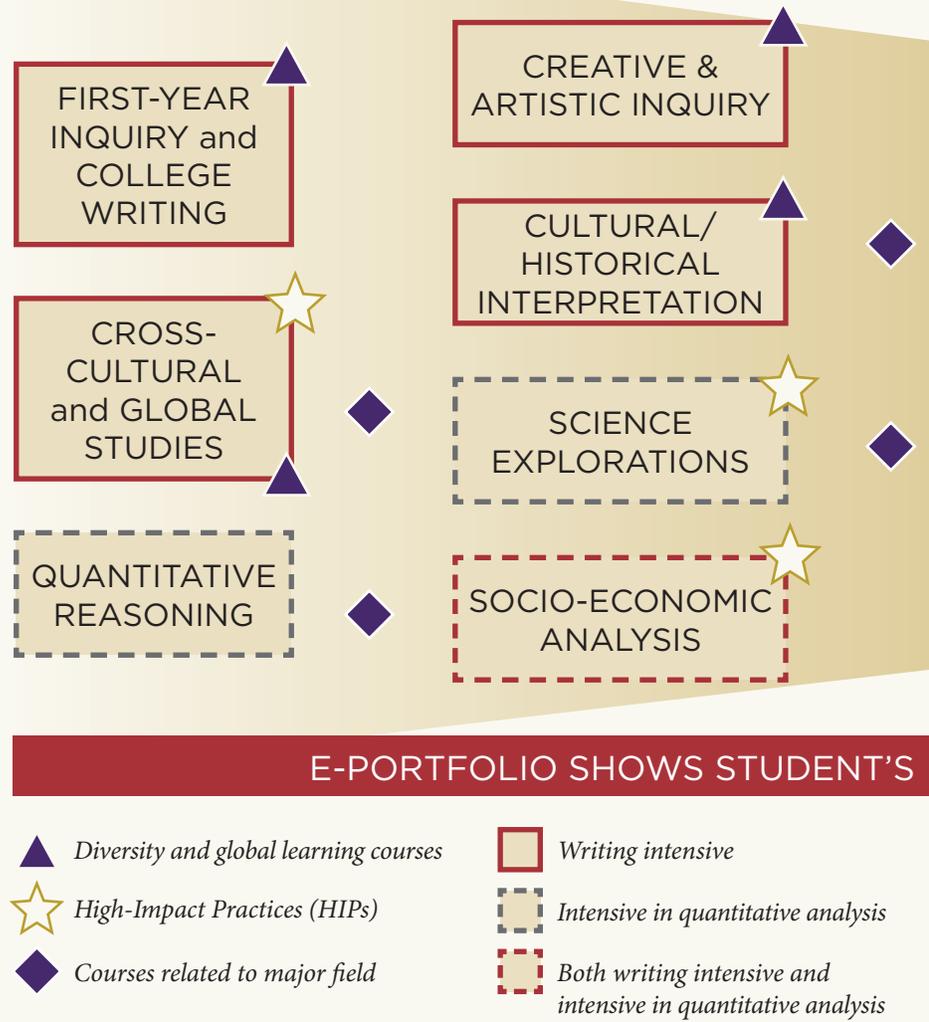
College graduates are 2.4 times as likely to be **engaged at work** if they had an internship or job that allowed them to apply their classroom learning, were active in cocurricular activities, and worked on a project that took a semester or more to complete.

Only 6 percent of graduates report having all of these experiences. Only 32 percent report working on a project that took at least a semester to complete.\*\*

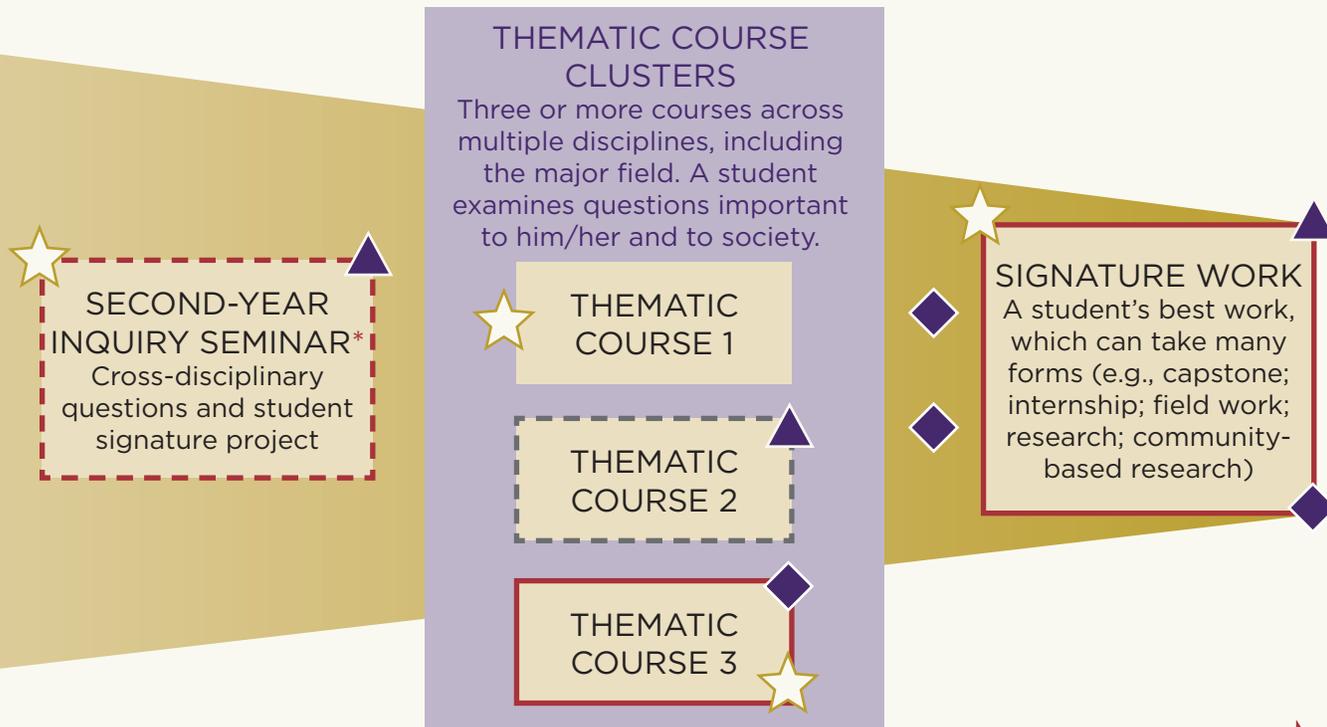
\*\*Gallup. *Great Jobs, Great Lives: The 2014 Gallup-Purdue Index Report* (2014).

# Sample Guided Pathway with Signature Work

Preparing students to do Signature Work will require thoughtful redesign of curricular pathways. This example of a general education pathway is rich with problem-based learning. It can be integrated with any well-designed major. Students taking this pathway would develop core intellectual skills and knowledge through exploration of big questions, and they would be required to apply their learning in their own Signature Work.



“It is high time to break free of the old ‘breadth first, depth second’ model for college learning. Instead, we need guided pathways to integrative and adaptive learning. We must ensure that all students are given opportunities to tackle complex questions—from first to final year.” — Carol Geary Schneider, President, AAC&U



*\*For students in two-year degree programs, this work is Signature Work. For students in four-year degree programs, it is preparation for Signature Work. Transfer students may take the second-year inquiry seminar at the original institution or following transfer.*

# Liberal Education and America's Promise

The LEAP Challenge is part of the next phase of AAC&U's ongoing initiative, Liberal Education and America's Promise: Excellence for Everyone as a Nation Goes to College (LEAP). Launched in 2005, LEAP asks core questions about the learning students most need from college; listens and responds as employers make the case that today's workers need to be better prepared for a global economy; and focuses on education for knowledgeable and responsible citizenship, as well as careers.

**The LEAP Vision** includes a commitment to

- **Essential Learning Outcomes.** These are the learning outcomes essential for success in life and work in the twenty-first century (see page 9).
- **High-Impact Educational Practices (HIPs).** These are evidence-based practices that engage and challenge students. They include such things as first-year seminars, intensive writing, collaborative projects, internships, learning communities, undergraduate research, capstone courses, and diversity/global learning courses and programs.
- **VALUE Assessments.** Using students' own work and faculty-validated VALUE rubrics, colleges should probe whether each student has developed Essential Learning Outcomes, and can apply his or her learning to complex problems and real-world challenges.
- **Inclusive Excellence.** All students at every kind of institution should benefit from a deep, hands-on, and practical liberal education that prepares them for success in work, life, and citizenship.

## LEAP STRATEGIES FOR CHANGE

Hundreds of institutions and a growing roster of state systems now are using the LEAP framework of Essential Learning Outcomes, High-Impact Educational Practices, VALUE Assessments, and Inclusive Excellence.

The LEAP Challenge is intended to help institutions take their foundational work on liberal education and inclusive excellence to the next level. The long-term goal is to ensure that every one of our students reaps the full benefit of an empowering liberal education, no matter what his or her background, intended major, or career and life aspirations. There are many pathways to students' achievement and demonstration of Essential Learning Outcomes through Signature Work. Each of our students deserves our help in finding the right pathway.

# The LEAP Principles of Excellence

The Principles of Excellence offer both challenging standards and flexible guidance so they can support high-quality learning at any college or university. These principles can be used to guide change and to influence practice across the disciplines as well as in general education programs. Signature Work is a natural outgrowth of these principles.



## PRINCIPLE ONE

### AIM HIGH—AND MAKE EXCELLENCE INCLUSIVE

Make the Essential Learning Outcomes a Framework for the Entire Educational Experience, Connecting School, College, Work, and Life

## PRINCIPLE TWO

### GIVE STUDENTS A COMPASS

Focus Each Student’s Plan of Study on Achieving the Essential Learning Outcomes—and Assess Progress

## PRINCIPLE THREE

### TEACH THE ARTS OF INQUIRY AND INNOVATION

Immerse All Students in Analysis, Discovery, Problem Solving, and Communication, Beginning in School and Advancing in College

## PRINCIPLE FOUR

### ENGAGE THE BIG QUESTIONS

Teach through the Curriculum to Far-Reaching Issues—Contemporary and Enduring—in Science and Society, Cultures and Values, Global Interdependence, the Changing Economy, and Human Dignity and Freedom

## PRINCIPLE FIVE

### CONNECT KNOWLEDGE WITH CHOICES AND ACTION

Prepare Students for Citizenship and Work through Engaged and Guided Learning on “Real-World” Problems

## PRINCIPLE SIX

### FOSTER CIVIC, INTERCULTURAL, AND ETHICAL LEARNING

Emphasize Personal and Social Responsibility, in Every Field of Study

## PRINCIPLE SEVEN

### ASSESS STUDENTS’ ABILITY TO APPLY LEARNING TO COMPLEX PROBLEMS

Use Assessment to Deepen Learning and to Establish a Culture of Shared Purpose and Continuous Improvement

“Businesses today...look for strategic thinkers, innovators, and problem solvers who will contribute to the success and future growth of their organization. The [LEAP] Principles...create a solid framework for the academic and business communities to utilize when aligning curriculum to business demand.”

— Robert C. Wonderling  
President & CEO, Philadelphia  
Chamber of Commerce

# The LEAP Essential Learning Outcomes

Beginning in school, and continuing at successively higher levels across their college studies, students can prepare for both responsible citizenship and a global economy by achieving the Essential Learning Outcomes (ELOs).



## › KNOWLEDGE OF HUMAN CULTURES AND THE PHYSICAL AND NATURAL WORLD

- Through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts

*Focused by engagement with big questions, both contemporary and enduring*

## › INTELLECTUAL AND PRACTICAL SKILLS, INCLUDING

- Inquiry and analysis
- Critical and creative thinking
- Written and oral communication
- Quantitative literacy
- Information literacy
- Teamwork and problem solving

*Practiced extensively, across the curriculum, in the context of progressively more challenging problems, projects, and standards for performance*

## › PERSONAL AND SOCIAL RESPONSIBILITY, INCLUDING

- Civic knowledge and engagement—local and global
- Intercultural knowledge and competence
- Ethical reasoning and action
- Foundations and skills for lifelong learning

*Anchored through active involvement with diverse communities and real-world challenges*

## › INTEGRATIVE AND APPLIED LEARNING, INCLUDING

- Synthesis and advanced accomplishment across general and specialized studies

*Demonstrated through the application of knowledge, skills, and responsibilities to new settings and complex problems*

Note: This listing was developed through a multiyear dialogue with employers and with hundreds of colleges and universities about needed goals for student learning; analysis of a long series of recommendations and reports from the business community; and analysis of the accreditation requirements for engineering, business, nursing, and teacher education. The findings are documented in previous publications of the Association of American Colleges and Universities: *College Learning for the New Global Century* (2007) and *The LEAP Vision for Learning* (2011). For more information, see [www.aacu.org/leap](http://www.aacu.org/leap).





**Liberal Education and America's Promise (LEAP)** is a national advocacy, campus action, and research initiative that champions the importance of a twenty-first-century liberal education—for individuals and for a nation dependent on economic creativity and democratic vitality. LEAP responds to the changing demands of the twenty-first century—demands for more college-educated workers and more engaged and informed citizens. Today, and in the years to come, college graduates need higher levels of learning and knowledge as well as strong intellectual and practical skills to navigate this demanding environment successfully and responsibly. Launched in 2005, LEAP challenges the traditional practice of providing liberal education to some students and narrow training to others. Through LEAP, hundreds of campuses and many state systems are making far-reaching educational changes to help all their students—whatever their chosen major field of study—achieve a set of Essential Learning Outcomes fostered through a liberal education.



**The Association of American Colleges and Universities (AAC&U)** is the leading national association concerned with the quality, vitality, and public standing of undergraduate liberal education. Its members are committed to extending the advantages of a liberal education to all students, regardless of academic specialization or intended career. Founded in 1915, AAC&U now comprises more than 1,300 member institutions—including accredited public and private colleges, community colleges, research universities, and comprehensive universities of every type and size.

Information about AAC&U membership, programs, and publications can be found at [www.aacu.org](http://www.aacu.org).

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