The Baccalaureate Degree: Meaning, Integrity, and Quality

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Association of American Colleges and Universities

CHANGING EDUCATIONAL PRACTICES

Established	Modified	Emerging
focuses on teaching	in recognition that what is taught is not always what is learned	ALSO focuses on learning
emphasizes what an educated person should know	in recognition of the explosion of available information	ALSO emphasizes how to find and evaluate needed information and what students can do with their knowledge
sees the curriculum predominantly as a conveyor of well-established knowledge	in recognition of the world's complexity	ALSO interprets education as an informed probing of questions, values choices
assumes a relatively homogeneous group of students	given diversity as a social reality	engages diversity as a resource for learning
emphasizes study in a discipline	in recognition of the multi- disciplinary approach needed to understand real world problems	ALSO seeks connections within and across disciplines
emphasizes individual work	given the need to work as members of teams in the workplace and in community life	ALSO values collaborative work, particularly in diverse groups
stresses critical thinking	given the need for civic engagement in major policy decisions	ALSO links critical thinking to real-life problems, often involving contested values
promotes objective analysis and scholarly research	in recognition of the need to shape the rapid pace of change	ALSO develops creativity by valuing innovation and active problem-solving
studies majority Western cultures, perspectives, and issues	to respond to the plurality of the modern world, worldwide problems, and interdependence	ALSO examines and engages with a range of cultures, cultural complexity, and global issues
values learning for learning ' s sake	to acknowledge the new role of higher education in U.S. society	ALSO celebrates practical knowledge
considers higher education in isolation from primary and secondary education	given the need to build an aligned system to reach greater expectations	sees college learning as a part of a continuum with, and dependent on, the K-12 learning environment

Adapted from: Greater Expectations: A New Vision for Learning as a Nation Goes to College (Association of American Colleges & Universities, 2002)

The Essential Learning Outcomes

Beginning in school, and continuing at successively higher levels across their college studies, students should prepare for twenty-first-century challenges by gaining:

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 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: *Greater Expectations: A New Vision for Learning as a Nation Goes to College* (2002), *Taking Responsibility for the Quality of the Baccalaureate Degree* (2004), and *Liberal Education Outcomes: A Preliminary Report on Achievement in College* (2005). *Liberal Education Outcomes* is available online at www.aacu.org/leap.



Percentage of Employers Who Want Colleges to "Place More Emphasis" on Essential Learning Outcomes

*	Knowledge of Human Cultures and the Phys	f Human Cultures and the Physical and Natural World			
	Science and technology	82%			
	• Global issues	72%*			
	 The role of the United States in the world 	60%			
	• Cultural values and traditions (U.S./global)	53%*			
*	Intellectual and Practical Skills				
	 Teamwork skills in diverse groups 	76%*			
	 Critical thinking and analytic reasoning 	73%			
	Written and oral communication	73%			
	Information literacy	70%			
	Creativity and innovation	70%			
	Complex problem solving	64%			
	Quantitative reasoning	60%			
*	Personal and Social Responsibility				
	Intercultural competence (teamwork in diverse groups)	76%*			
	 Intercultural knowledge (global issues) 	72%*			
	• Ethics and values	56%			

Cultural values/traditions—U.S./global

Integrative and Applied Learning

Applied knowledge in real-world settings

73%

53%*

Note: These findings are taken from a survey of employers commissioned by the Association of American Colleges and Universities and conducted by Peter D. Hart Associates in November and December 2006. For a full report on the survey and its complete findings, see www.aacu.org/leap.

*Three starred items are shown in two learning outcome categories because they apply to both.



2008 Employer Survey Findings¹

	Very well prepared (8-10 ratings)*	Not well prepared (1-5 ratings)*	Mean Rating*
Global knowledge	18%	46%	5.7
Self-direction	23%	42%	5.9
Writing	26%	37%	6.1
Critical thinking	22%	31%	6.3
Adaptability	24%	30%	6.3
Self-knowledge	28%	26%	6.5
Oral communication	30%	23%	6.6
Quantitative reasoning	32%	23%	6.7
Social responsibility	35%	21%	6.7
Intercultural Skills	38%	19%	6.9
Ethical Judgement	38%	19%	6.9
Teamwork	39%	17%	7.0

Employers Grade Student Learning in College

* ratings on 10-point scale: 10 = recent college graduates are extremely well prepared on each quality to succeed in entry level positions or be promoted/advance within the company

Employers Advise on Where to Focus Assessment Resources



¹ Note: these findings are taken from a survey of employers commissioned by the Association of American Colleges and Universities and conducted by Peter A. Hart Associates in November and December 2007. For a full report on the survey and its complete findings, see www.aacu.org/leap.

2009 Survey of Chief Academic Officers at AAC&U Member Institutions (www.aacu.org/membership/membersurvey)

All Survey Respondents



78% That Have Goals



Comparing the AAC&U LEAP Outcomes with the American Society for Biochemistry and Molecular Biology (ASBMB) Learning Outcomes

LEAP	ASBMB			
Knowledge of Human Culture and the Physical and Natural World				
Study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts	 Understanding of the fundamentals of chemistry and biology and the key principles of biochemistry and molecular biology 			
Intellectual and Practical Skills				
 Inquiry and analysis Critical and creative thinking Written and oral communication Quantitative literacy Information literacy Teamwork and problem solving 	 Ability to assess primary papers critically Good quantitative skills Ability to design experiments and understand the limitations of the experimental approach Ability to interpret experimental data Ability to design follow-up experiments Ability to work safely and effectively in a laboratory Awareness of the available resources and how to use them Ability to collaborate with other research tools Ability to use oral, written, and visual presentations to present their work to both a science-literate and a science- 			
Personal and Social Responsibility				
 Civic knowledge and engagement - local and global Intercultural knowledge and competence Ethical reasoning and action Foundations and skills for lifelong learning 	 Awareness of the major issues at the forefront of the discipline Awareness of the ethical issues in the molecular life sciences 			
Integrative Learning				
 Synthesis and advanced accomplishment across general and specialized fields 	 Ability to dissect a problem into its key features Ability to think in an integrated manner and look at problems from different perspectives 			

From Biochemistry/Molecular Biology and Liberal Education: A Report to the Teagle Foundation (American Society for Biochemistry and Molecular Biology, 2008)