

**Special Report of the Dean of Undergraduate Education  
on Modifications to General Education Requirements**

Submitted to the Faculty Senate on June 29, 2009

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## BACKGROUND

In September, 2007, Provost Charlena Seymour and the Rules Committee created a joint administration/senate General Education Task Force (GETF, membership listed in Appendix A) in order to “re-energize and improve this important component of undergraduate education.” The Task Force worked throughout AY 2007-08, and its charge was extended through AY 2008-09. The GETF proposed a number of improvements to the General Education program, including promoting broader understanding of and commitment to the goals and purposes of the Gen Ed program, and refreshing the goals and purposes statement to reflect the evolution of pedagogy and curricular needs since the current Gen Ed program was established in 1986. The final report of the GETF laid out the overall context for considering improvements to the Gen Ed program:

How might we adapt the current UMass Amherst Gen Ed program to enhance student learning within the context of a large research University? The GETF explored answers to this question by reviewing evidence about the UMass Amherst General Education experience, the extensive research on how individuals learn, and the innovative General Education practices in place at other research universities.

The review of this evidence and the research suggested areas for improvement in the General Education curricular design. Students, and in some cases faculty and advisors, talk about General Education as something to “get out of the way” as opposed to viewing the program as a coherent educational experience that draws from students’ previous knowledge, helps them build upon that knowledge through ongoing practice, emphasizes deep versus surface learning, and offers them opportunities to learn in community with others. Survey and Focus Group results show that students have trouble seeing the relevance of general education to their own interests, or to preparation for the work place. Students express dismay when their Gen Ed course experiences seem more like high school than college-level work. While students are critical of some of their experiences, they do acknowledge the value of General Education (see, for example, Appendix B). They also express appreciation for those courses that help them relate the subject matter to “real life,” that use instructional strategies that actively engage students in the topic, and that use varied assignments and assessment methods that foster “learning over cramming.”

In September 2008, the GETF sponsored a meeting of the university Councils and Committees that have responsibility for various aspects of the undergraduate learning experience (i.e., the General Education Council, Undergraduate Education Council, Undergraduate Writing Council, Undergraduate Deans Council) to facilitate a larger conversation about how to enhance learning in General Education. Together the 60 participants reviewed the evidence described above and generated ideas for improvements to the UMass Amherst Gen Ed model. The curricular priorities they identified centered on: (1) creating better alignment between Gen Ed learning objectives and students actual experiences; (2) improving coherence so that students revisit core Gen Ed goals throughout

their learning experiences; (3) enhanced integration of General Education content and experiences with “real world” questions, the majors, and post-college preparation; and (4) building community for students – by building student cohorts studying a common theme, infusing more interaction in the classroom, or more small class experiences.

Within this context, the GETF also discussed at length possible curricular changes that might make the Gen Ed program more effective and better integrated with curricula within the major. The two major reforms emerging from that discussion were moving from a 3-credit to a 4-credit course model for Gen Ed, and creating an upper-level integrative experience. The Task Force recommended that these two ideas be explored so that specific proposals for changes to the Gen Ed requirements could be considered.

The administration has moved forward with two such proposals, motivated in part by the desire to extend the energy and momentum of the Task Forces’ work, and in part by the recognition that the current configuration of the Gen Ed program will be difficult to sustain in light of the economic challenges facing the institution. These proposals jump-start the discussion called for by the Task Force, and enable timely consideration of changes that can be very valuable to the campus as we focus on providing an effective educational experience during a time of restricted resources.

The proposed changes are described separately, and are configured in such a way as to allow for sensible implementation of either or both. It is important to keep in mind, however, that the two changes can be viewed as quite complementary, and are therefore presented as a package offering considerable synergy.

The proposed changes represent another step in the continuing evolution of General Education requirements on the campus. Since the basic shape of the current program was adopted in 1986 the campus has made improvements and modifications on five occasions. This process of ongoing refinement is detailed in Appendix C, Evolution of General Education Requirements.

## **PROPOSAL**

The four-credit course model in conjunction with the upper-level integrative experience provides an important opportunity to reinforce a number of the key curriculum design principles that enhance student learning (see Appendix D for a brief overview of this literature). Specifically, this proposal will improve the opportunities for students to “Focus on Deep Knowledge,” “Learn in Community,” experience greater “Coherence” in the General Education curriculum, and have structured opportunities to “Synthesize” and “Integrate” their General Education experience

### **PART I: Partial credit conversion and course consolidation.**

The first proposal would convert course-credit requirements in the Social World and the Biological/Physical World subdivisions of the General Education curriculum from three to four, and change the requirement for AL/AT to one course and the requirement for BS/PS to one

course each. This would reduce the AL/AT requirement by one course, and reduce the total number of BS/PS courses required from three to two.

The general rationale for moving toward a four-credit basis for General Education appears in the final report of the GETF:

Moving from three-credit to four-credit General Education courses offers students in the early stages of their college experience the chance to spend more focused time on fewer courses, facilitating the opportunity to engage in the “deep knowledge” highlighted in the research. Students would be able to explore a topic or discipline in more depth and spend more time practicing the critical thinking and communication skills associated with the discipline. The four credit course design also makes it more possible for instructors to incorporate varied learning experiences (independent work, group work, application to “real world” topics, additional hands-on work) to facilitate student engagement in their learning (addressing “Learning in Community” and “Integrating Education and Experience”). These courses could also offer more challenge to students by requiring greater participation in the course.

This option also offers the possibility of a more efficient use of instructional resources. For example, this option may mean that fewer, better, General Education courses can be offered. A streamlined set of courses would help facilitate the General Education Council’s Quinquennial Review process, make communication with instructors and departments more manageable, and potentially improve alignment of course and General Education learning objectives.

An additional consideration is greater alignment of our campus course credit basis with the credit value assigned to these Gen Ed courses for students in the other four colleges of the Five College Consortium, at which our three-credit courses are treated as the equivalent of four credits.

Table 1 shows how this proposal would change the requirements for the Social World and Biological/Physical World divisions of General Education:

**Table 1.**

Division Subdivision	Current Courses (credits)		Proposed Courses (credits)	
	Lower Level	Upper Level	Lower Level	Upper Level
<b>Writing</b>	<b>1 (3)</b>	<b>1 (3)</b>	<b>1 (3)</b>	<b>1 (3)</b>
<b>Analytic Reasoning</b>				
R1*	<b>1 (3)</b>		<b>1 (3)</b>	
R2	<b>1 (3)</b>		<b>1 (3)</b>	
<b>Biological &amp; Physical World</b>				
BS	<b>1 (3)</b>		<b>1 (4)</b>	
PS	<b>1 (3)</b>		<b>1 (4)</b>	
Other BS/PS	<b>1 (3)</b>			
<b>Part I</b>	<b>Social World</b>			
	AL / AT	<b>2 (3)</b>		<b>1 (4)</b>
	HS	<b>1 (3)</b>		<b>1 (4)</b>
	SB	<b>2 (3)</b>		<b>2 (4)</b>
	Other social world	<b>1 (3)</b>		<b>1 (4)</b>
Note: The Part I proposal retains the "Other social world" requirement, changing it from three credits to four credits; the Part II proposal would eliminate the "Other social world" requirement in favor of an upper-division integrated experience.				
<b>Part II</b>	Other social world	<b>1 (3)</b>		
	<b>Integrative Experience</b>			<b>1 (3)</b>
<b># of Courses</b>	LL =12; UL =1; Total=13			
<b># of Credits</b>	LL=36; UL=3; Total=39			
<b># of Courses</b>			<b>Part I Alone</b>	
<b># of Credits</b>			LL=10; UL=1; Total=11 LL=37; UL=3; Total=40	
<b># of Courses</b>			<b>Part II Alone</b>	
<b># of Credits</b>			LL=11; UL=2; Total=13 LL=33; UL=6; Total=39	
<b># of Courses</b>			<b>Parts I and II Together</b>	
<b># of Credits</b>			LL=9; UL=2; Total=11 LL=33; UL=6; Total=39	

■ Proposed change in requirements

\* May test out of requirement

Note: The two-course Social and Cultural Diversity requirement may overlap or stand alone.

In the Part I proposal, the number of courses required in the Social World division decreases from 6 (18 credits) to 5 (20 credits) and the number in the Biological and Physical World decreases from 3 (9 credits) to 2 (8 credits). Writing and Analytic Reasoning requirements remain unchanged both in terms of number of courses and number of credits. The number of General Education courses taken is decreased in the lower division from 12 to 9 and overall from 13 to 11 (Note: Table 1 also shows the effect of the Part II proposal, described below).

**NOTE:** Currently, some BS/PS courses with lab components may carry three credits (including an embedded lab), and some are organized with a free-standing lab section carrying one credit. In the proposed system any BS/PS course with a formal scheduled lab component would be counted as a four-credit offering.

### **Impact of 4-credit courses in the subdivisions**

The campus has examined the 4 credit course basis for implementation across the entire undergraduate curriculum periodically. Major efforts included a 1996 ad hoc committee charged by Provost Patricia Crosson and a faculty-initiated study by an ad hoc committee of the Academic Matters Council in 1999. Both studies identified a number of benefits associated with the four-credit model, but both also noted considerable transitional and other issues. This proposal neither considers nor envisions such sweeping changes impacting the credit basis of courses in a major, or of service courses, or of elective courses; rather it focuses only on a specified portion of General Education curriculum. It should be noted that a substantial number of current Gen Ed courses are offered on a four-credit basis.

Adopting a four credit basis for AL/AT, SB, HS, BS, and PS courses assumes additional student work together with the appropriate evaluation of that work. But, students will generally enroll in fewer courses per semester while completing Gen Ed requirements. Student work can take various forms, including additional formal contact hours emphasizing content delivery. But, at least until our campus classroom inventory improves, more likely approaches are those incorporating other activities. Additional credit-bearing work could occur as additional assignments, additional instructional activities like group work, out-of-class/applied experiences, online instruction/tutorials, blended instruction, etc. The General Education Council will be asked to develop guidelines for evaluating the “4<sup>th</sup>-credit” component, consistent with existing campus policy on assignment of credit to courses.

### **Transition Issues**

The transition to Gen Ed subdivision courses encompassing 4 credits of content will occur in three ways: 1) Existing four-credit courses will satisfy the new requirement; 2) existing three-credit courses will be reconfigured or augmented with a 4<sup>th</sup>-credit component; and 3) new 4-credit courses will be developed. Established course and Gen Ed approval processes will govern this transition. The Provost will work with the Rules Committee, the General Education Council, and the Academic Matters Council to develop a clear timeline and process for the temporary increase in the volume of course proposals. The Provost will also develop a plan to support course development efforts, and to support various “4<sup>th</sup>-credit” strategies. Implicit in that planning is the recognition that the reduction of Gen Ed course requirements from 12 to 10 creates an opportunity to redistribute resources.

As with any transition, care must be taken to provide clear guidance to students. The Provost will work with the Registrar and appropriate governance groups to establish transition strategies for entering students and students already participating in the Gen Ed program. As a general principle, students will not be asked to assume any additional burden to complete their Gen Ed requirements, and to the extent practicable will be extended the opportunity to take advantage of the proposed revisions.

## **Part II. Upper-Division Integrative Experience**

The underlying rationale for moving toward an upper-division integrative experience was also extensively discussed by the General Education Task Force, and is summarized in the final report of the Task Force:

In recent years there has been increased emphasis on integrative learning as an essential component of preparing college students for their future. The Association of American Colleges and Universities (AAC&U), a national organization taking a leadership role in general education and liberal learning curricular development, identifies integrative learning as one of the Essential Learning Outcomes students need to develop to excel in a “complex and volatile world” (AAC&U, 2007, p. 13). At the same time, the burgeoning research into how individuals learn has highlighted the challenge that novice learners face in making connections among seemingly disparate sets of information and experiences (see, for example, the National Research Council, 1999 & 2001). Therefore, institutions of higher learning are being called upon to offer students multiple opportunities to practice “integrating and applying their learning” to new situations, challenging questions, and real-world problems (AAC&U, 2007, p. 13).

The upper-division integrative experience provides a structured context for students to reflect on their own learning and explore the connections between the broad exposure provided by General Education and the more focused exposure of their major (offering a “Synthesizing Experience”). This experience would also provide students with opportunities to practice General Education learning objectives like oral communication, collaboration, and interdisciplinary perspective taking, at a more advanced level (“Coherence”). Finally, it offers students an additional common learning experience within their major (“Learning in Community”).

To achieve this kind of integrative experience within the context of our General Education program, it is proposed that the “sixth social world” requirement (the “other social world” course that is required in addition to two AL/AT courses, one HS course, and two SB courses) be replaced with an upper-division experience that would be organized within or across departments and/or colleges. Table 1 illustrates the implementation of this change.

The 3-credit integrative experience might be offered in a number of ways: as a distinct course; as a set of experiences distributed across more than one course; or through a combination of course-based and other appropriate activity. One opportunity to be explored is how closely the integrative and junior year writing components might be aligned.

The specific rationale for this approach rests on the realization that, as currently configured, the sixth social world requirement adds relatively little in terms of breadth, provides little or no benefit to the student in terms of coherence, and strongly reinforces the notion that General Education is an introductory curriculum with little connection or relevance to study in the major. In contrast, the upper-level integrative experience would take advantage of the considerable breadth remaining in the lower division, would provide an opportunity for drawing together and

reflecting on the disparate perspectives of the lower-division offerings, and would give life to the assertion that General Education can and should pervade the undergraduate experience.

## **Transition Issues**

Guidelines for the development of the integrative experience will be developed in cooperation with the General Education Council. An approval process modeled on that for the Junior Year Writing requirement is envisioned.

Because this change involves an upper-division requirement, the new integrative experiences do not need to be immediately available. The Provost, working in cooperation with the General Education Council and others, will develop a timetable for the introduction of the integrative experience; a process for development and consideration of proposals; and an advising framework for students at various stages of Gen Ed completion. As with the course and credit conversion proposal, as a general principle students will not be asked to assume any additional burden to complete their Gen Ed requirements, and to the extent practicable will be extended the opportunity to take advantage of the proposed revisions.

## **References**

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**MOTIONS: That the Faculty Senate approve revisions of the General Education requirements as follows:**

- **Motion I. change from a 3-credit basis to a 4-credit basis those courses within the Social World and the Biological/Physical World subdivisions of the General Education curriculum and change the requirement for AL/AT to one (4 credit) course and for BS/PS to one 4 credit course each**
- **Motion II. eliminate the “other Social World” requirement and create a formal upper level Integrative Experience requirement.**

## **Appendix A.**

### **UMass Amherst General Education Task Force General Education Task Force 2007-2009**

#### **Task Force Members:**

##### *Faculty*

Maurianne Adams (Education, Rules Committee, and General Education Council)  
Martha Baker (Natural Resources and the Environment)  
Carol Barr (Undergraduate Studies)  
Elizabeth Chilton (Anthropology)  
Barbara Cruikshank\* (Political Science)  
Alexandrina Deschamps (Women's Studies, Rules Committee, and General Education Council)  
Isabel Espinal\*\* (Research and Instructional Services and General Education Council)  
Robert Feldman (Social and Behavioral Sciences)  
Justin Fermann (Chemistry)  
Stephen Gencarella\*\* (Communication)  
Judy Goodenough\*\* (Biology and General Education Council)  
Anne Herrington (English and General Education Council)  
Randall Knoper (English and General Education Council)  
Mark Leckie (Geosciences and General Education Council)  
Alan Lutenegger (Civil and Environmental Engineering and General Education Council)  
John McCarthy (Linguistics and Rules Committee)  
Anne C. Moore\* (Library)  
W. Brian O'Connor\* (Biology and Rules Committee)  
Amilcar Shabazz (Afro-American Studies)  
Julian Tyson\*\* (Chemistry)  
Wilmore Webley (Microbiology)  
Gordon Wyse\* (Biology)

##### *Administrators*

Marilyn Blaustein (Institutional Research)  
John Cunningham (Deputy Provost and Dean of Undergraduate Education)  
Bryan Harvey (Associate Provost)  
Pamela Marsh-Williams (Assistant Provost and General Education Council)  
Richard Rogers (Associate Provost)  
Charlena Seymour (Provost)  
Martha Stassen (Academic Planning and Assessment)

##### *Graduate Students*

Emily Cachiguango\*\* (Education)  
Amy Fleig\* (Political Science)

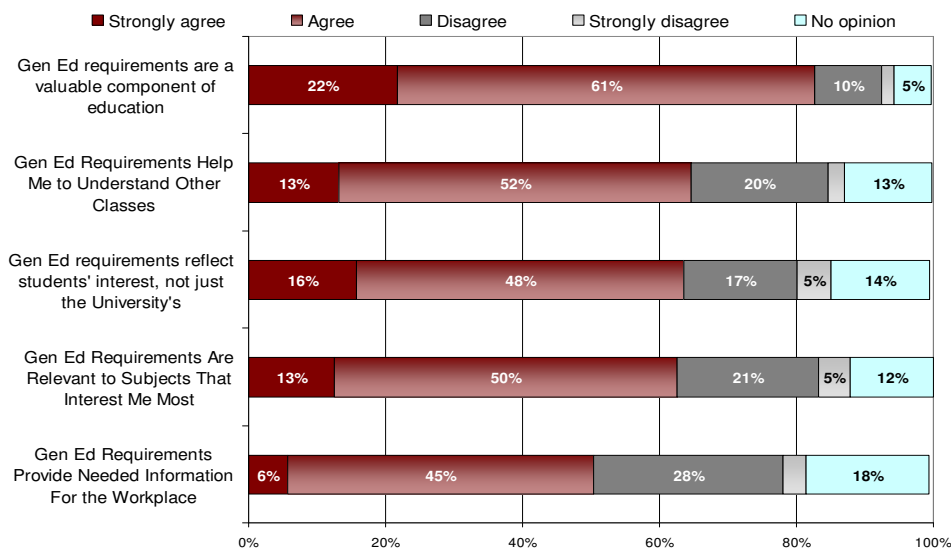
\*2007-2008

\*\*2008-2009

**Appendix B.**



**Survey\*: Student Agreement to Gen Ed Statements**



\*December 2007 Survey of undergraduates enrolled in the General Education course: "The Biology of Cancer and Aids" (N=423, Response rate = 89%)

**Appendix C. EVOLUTION OF GENERAL EDUCATION REQUIREMENTS**

The course requirements for satisfaction of the General Education curriculum (expressed in units of standard 3 credit courses) are defined in Sen. Docs. 85-024a and b, as amended periodically through 2001. The requirements are stated in several documents as excerpted below with italics indicating key changes over time.

**(1) from Fac. Sen. Doc. 85-024b**

*The General Education Curriculum has three principal divisions: the Social World, Biological and Physical World, and Analytic Reasoning.* These are general titles and reflect the idea that courses should be assigned to a category because of its content rather than because it is taught by a particular department. Thus departments may have course designations in more than one area.

*The Social World has three major subdivisions: The Arts, Historical Studies, and Social and Behavioral Sciences.* Students must take two courses in each of these subdivisions. In addition, there is a Human and Cultural Diversity component to the Social World requirement. *All students must take two courses in the Social World that also have a Human and Cultural Diversity designation.*

*The Biological and Physical World has two major subdivisions: Biological Sciences and Physical Sciences. Students must take three courses in this area, with at least one course being taken in each subdivision. At least one of the three courses taken to satisfy the requirement in this area must have a laboratory component associated with it.*

*The Analytic Reasoning has two major subdivisions: Tier I and Tier II. Tier I is a basic competency requirement. Tier II requires students to take at least one course in mathematical, quantitative, numerical, analytical or formal reasoning.*

In addition to the three principal divisions, there is an Experimental/Interdisciplinary category. Its purpose is to provide an incentive and a structure for faculty to develop alternate curriculum approaches to General Education. These courses may carry one or more major area designations. The student may satisfy up to three General Education courses through the Experimental/Interdisciplinary category.

To summarize, the proposed requirements for General Education courses are in three principal divisions:

- (1) The Social World
- (2) The Biological and Physical World
- (3) Analytic Reasoning

*... Within the Biological and Physical Sciences category, students will be required to take three courses, with at least one in a Biological science and one in a Physical science.*

## **(2) from Fac Sen Doc 90-015**

The AMC and GEC recommend unanimously that the current Social World requirements of the General Education Program be modified as follows:

A. SOCIAL WORLD. Six courses are required, distributed as follows.

- (i) One course in Literature (AL).
- (ii) One course in the Arts (AT) or a second course in AL.
- (iii) *One course in Historical Studies (HS).*
- (iv) Two courses in the Social & Behavioral Sciences (SB).
- (v) *A sixth course which may be any Social World (AL, AT, HS, SB) or Interdisciplinary (I) course.*

B. DIVERSITY. Two courses with a Diversity designation are required.

*An alternative means is to use stand-alone D course(s). Students using stand-alone D courses must still satisfy the 6-course Social World. Only one Diversity course in the major may be applied toward satisfying the two-course Diversity requirement or Interdisciplinary (I) course.*

## **(3) from Fac. Sen. Doc 96-003**

*Students may satisfy the Basic Math Skills requirement by one of the following methods: (1) achieving an appropriate score on the Mathematics Placement Test that is given to all entering students; (2) passing a mathematics course designated as R1; or (3) achieving an appropriate score on the Basic Mathematics Skills Exemption Examination.*

The Exemption Examination will be given at least twice each semester, at registration and pre-registration. A student may take the Exemption Examination as often as he or she wishes to do so. The Basic Math Skills Exemption Examination will be designed, interpreted and administered by the Department of Mathematics and Statistics, subject to periodic review by the General education Council of the Faculty Senate. Its purpose will be to test for competency in basic skills in quantitative and analytic reasoning as defined above.

**(4) from Fac. Sen. Doc. 02-013**

13-02: That the Faculty Senate approve the change to the Social & Cultural Diversity “D” designation of the General Education courses listed in Recommendation 1 of Sen. Doc. No. 02-013 to the *Social & Cultural University “U” designation, to denote that they focus on diversity in the United States.*

14-02: That the Faculty Senate approve the change to the Social & Cultural Diversity “D” designation of the General Education courses listed in Recommendation 2 of Sen. Doc. No. 02-013 to the *Social & Cultural Diversity “G” designation, to denote that they focus on diversity in global perspective.*

**(5) from Fac. Sen. Doc. 04-019**

The language governing the use of Interdisciplinary courses would be changed as follows:

*Students may satisfy up to three of their General Education requirements by taking interdisciplinary courses.*

*Courses that are interdisciplinary across the areas of the Social World have the “I” designation. Courses that are interdisciplinary between the Social World and the Biological/Physical Sciences and/or Analytic Reasoning have the “SI” (for Science Interdisciplinary) designation.*

Substitution of interdisciplinary courses for General Education requirements is restricted as follows:

- No substitutions may be made for College Writing, Basic Math Skills, or Analytic Reasoning.
- All students must take at least one course in each of the following areas: Literature, Historical
- Studies, Social and Behavioral Sciences, Biological Sciences, and Physical Sciences.
- An interdisciplinary course with the “I” designation can be substituted for the second Arts course (AL or AT), the second Social & Behavioral Sciences course (SB), or the sixth Social World course (AL, AT, HS, or SB).
- An interdisciplinary course with the “SI” designation can be substituted for the second Arts course (AL or AT), the second Social & Behavioral Sciences course (SB), the sixth Social World course (AL, AT, HS, or SB), or the third Science course (BS or PS).

- *An Interdisciplinary course will fulfill a Social and Cultural Diversity requirement only if it carries both an Interdisciplinary designation and a Diversity designation (IG, IU, SIG, or SIU).*

NOTE: The laboratory requirement in 85-024b has not been enforced.

## Appendix D.

UMassAmherst

### Research on How People Learn: Key Principles for Curriculum Design<sup>1</sup>

- **Connections to Prior Learning:** New information must be meaningfully connected to previous knowledge to be remembered (previous knowledge/beliefs can enhance or impede new learning).
- **High Expectations:** Students learn more effectively when expectations for learning are placed on high but attainable levels and when these expectations are communicated clearly from the outset.
- **Focus on Deep Knowledge:** Long term learning depends on a focus on understanding concepts, disciplines, ways of knowing as opposed to a focus on facts/memorization.
- **Coherence:** Students succeed best in developing higher-order skills (critical thinking, written and oral communication, problem solving) when such skills are reinforced throughout their educational program.
- **On-going Practice:** Unpracticed skills atrophy quickly, particularly cores skills like computation and writing.
- **Synthesizing Experiences:** Students learn best when they are required to synthesize knowledge and skills learned in different places in the context of a single problem or setting.
- **Learning in Community:** People learn best in community—through discourse and interaction with others – and is facilitated by learning environments that foster these interactions.
- **Integration of Education and Experience:** Classroom learning is both augmented and reinforced by multiple opportunities to apply and transfer what is learned.

<sup>1</sup>Taken from Diamond (1998) & Education Commission of the States (1995) with adaptations based on Huba & Freed (2000), Gardiner (1996), Mentkowski (2000), National Research Council (1999) & (2001).

Martha L. A. Stassen (2008) UMass Amherst Office of Academic Planning and Assessment