Final Report  
Learning Enhancement Taskforce  
College of Liberal Arts and Sciences, University of Colorado Denver  
June 2014

Executive Summary

The strongest conviction of the LET is that CU Denver can raise the level of undergraduate learning, enhance students’ sense of belonging, improve retention and completion, and heighten the academic quality and the identity of our university by working collectively on reforms to increase integrative learning. Integrative learning prepares graduates to be innovative and analytical thinkers but also self-reflective, civic-minded, and ethical thinkers who synthesize knowledge from multiple disciplines and experiences to address unscripted real-world problems. Integrative learning works toward increased curricular coherence, is inherently interdisciplinary, and is application-oriented. Integrative learning is what students experience when faculty and staff more intentionally design the connections in curricular and co-curricular elements and are more explicit about that design and the learning goals upon which it is based. This report provides the support for these conclusions and for the recommendations drawn from them. Below is a selective summary of those recommendations; the four roman numerals are in priority order, as are the top two more specific recommendations underneath each of those.

Recommendation I: Strengthen the campus culture around teaching and learning.
   A. Value faculty development in teaching more highly, first by fully funding the Center for Faculty Development.
   B. Value teaching equally in faculty review, incentives, and rewards. (See below for the additional recommendations I.C.-F. and for fuller description of each recommendation.)

Recommendation II: Reaffirm campus-wide commitment to the teaching and learning of essential skills and dispositions for all undergraduates in all majors.
   A. Adopt/adapt the ELOs as the campus’ common learning outcomes.
   B. Reconceptualize and reform the CU Denver Core. (See below for II.C.)

Recommendation III: Integrate curricula across the entire undergraduate experience.
   A. Integrate the general-education Core into the majors.
   B. Integrate the disciplines further into the general-education Core. (See below for III.C.-E.)

Recommendation IV: Increase student engagement and learning by increasing the availability of High-Impact Practices (listed in Appendix R).
   A. Increase service learning, community-based learning, and internships.
   B. Create and expand a learning communities (LC) program. (See below for IV.C.-I.)

I. Introduction, Background, Process

The Learning Enhancement Taskforce (LET) was launched in January 2011, and the members, listed in Appendix A, chose to continue work beyond the initial completion date for an additional semester through May 2014. The charge from then Dean Dan Howard was to investigate any and all reforms that would improve the learning of CU Denver undergraduate students. Within the first six months of research and consultation, the members came to several general conclusions:

1. **It is (past) time to evolve.** Liberal arts and sciences education—the foundation of CU Denver’s undergraduate education for all majors—and the traditional structure of the university—in
which majors, general education, co-curriculum, and experiential learning are siloed and teaching is still too teacher-centric rather than student-centric—have not changed at the rate of society, students, or the job market.

2. **The teaching-learning mission is a crucial priority.** Given the current realities facing higher education and the downtown campus, student learning and student success (completion, jobs) need to be considered our two primary educational “products.” The ongoing success of this campus depends on our ability to provide a high-quality educational experience. **Academic quality**, in teaching especially but also in student services, is the primary determinant of student learning and satisfaction, which in turn are the primary determinants of student success and attracting and retaining students. Thus, building and sustaining academic quality should figure more prominently in faculty and staff hiring, incentives, and rewards, on the one hand, and in institutional branding and marketing, on the other hand. In today’s global marketplace, successful schools will be the ones that provide outstanding learning experiences for students.

3. **We can do better.** National studies suggest that a larger than desirable percentage of university students are graduating without expected levels of competency in essential skills, such as writing and quantitative literacy, and in essential dispositions, such as understanding civic, ethical, and diversity-related responsibilities. Furthermore, many students are not graduating in the desired time-frames or are not being adequately supported to ensure their retention.

4. **It is those essential skills and dispositions that students need most.** The instant availability of “content” via the internet means that universities need to focus (even more than they always have) on delivering the **skills** to analyze, evaluate, apply, adapt, synthesize, and communicate that content. The rate of change in the job market calls for these same non-discipline-specific transferable capabilities. This is what a liberal-arts-and-sciences-based education delivers. This does not demote the importance of the major, though it does elevate the importance of general education. It also points to the need to integrate the learning of those essential skills and dispositions across majors, general education, co-curriculum, and experiential learning.

5. **Shared learning outcomes and learning outcomes assessment therefore are key.** In order to improve the learning of essential skills and disposition by all undergraduates, all academic units and student-service units should **share** highest-order learning outcomes. Assessment of student learning of those outcomes is crucial, first as feedback to us for ongoing improvement and second to demonstrate to students, parents, citizens, and legislators the academic quality and value of the education we offer.

6. **These and related concerns are part of a national revolution in higher education.** Hundreds of other universities are facing the same challenges and asking the same questions as we are. Therefore, many examples are available from which to learn, and the LET studied a number of them. With over 1,300 member institutions, including CU Denver, the Association of American Colleges and Universities (AAC&U) is a primary leader of and resource in this conversation. It is time to join the national conversation.

These initial conclusions led the LET to its first recommendation, as stated in the January 2013 “Interim Report #2”: that the college, and subsequently the university, consider adopting or adapting the AAC&U’s Essential Learning Outcomes as the highest-order learning goals for all undergraduates (see Appendix B for the ELOs). The rationale for selecting the ELOs, as opposed to many other options considered, appears in that interim report (provided as Appendix C).
Rather than hold recommendations until a final report, the LET chose to consult, build consensus, and actively test ideas in collaboration with faculty and staff from the beginning. The taskforce worked from the grassroots upward, relying upon wide internal consultation, in addition to external expert consultation.

The CLAS Chairs/Directors were consulted throughout and provided regular feedback and consistent support (many thanks to them). In fall 2012, the LET administered a written survey to the chairs to help determine next steps (see Appendix D for the survey, and Appendix C includes a summary of responses). In spring and fall 2013, LET members delivered over 25 presentations and consultations with CLAS departments, as well as Student Government, upper administration, the Deans’ Council, Student Affairs, the Core Curriculum Oversight Committee, and Faculty Assembly (see Appendix E for a summary of faculty responses to those presentations). During that same period, LET administered a two-question survey to all CLAS faculty, asking which of the ELOs they consider most important for all undergraduates to learn and which they believe their program delivers. The questions and summary of the responses appear in Appendix F. 78% of the total 233 CLAS faculty completed the survey. This response rate and that the responses generally endorsed the ELOs provided strong validation for the LET. A more complete timeline of LET activities appears as Appendix G.

LET consultation with external experts included twice bringing to campus Dr. Terry Rhodes, AAC&U Vice President for Quality, Curriculum, and Assessment (in spring 2012 and fall 2013) and taking a team of six LET members to the AAC&U Institute, “Integrative Learning and the Departments: Faculty Leadership for the 21st Century,” held at Portland State University (July 10-14, 2013). The action plan that resulted from that working symposium, shown in Appendix H, provided key ideas and direction for subsequent work and the recommendations in this report.

Integration of curricula and “integrative learning” became guiding principles for the LET, as they have in discourse about higher-education reform across the country. Most simply, “integration” here means creating more meaningful and intentional connections between the often disjointed components of the whole educational experience. This pertains especially between the major and general education requirements, which often exist without reference to one another, but also across siloed majors and between them and co-curricular and experiential learning.

An integrative learning approach works toward more curricular coherence, which can be as direct as prerequisite enforcement but as complex as a learning community of three linked courses from multiple disciplines, plus accompanying co-curricular experiences, into which a cohort of students enrolls. It is inherently interdisciplinary, deliverable for example through team-teaching, transferring knowledge from one discipline to a problem in another, or writing-intensive courses taught within major disciplines. It also is application-oriented, because students learn essential skills and dispositions best when exercised in a discipline of interest or applied in a real context they care about (which points also to integrating research into teaching). Integrative learning (further defined with examples in Appendix N) prepares graduates to be innovative and analytical thinkers but also self-reflective, civic-minded, and ethical thinkers who synthesize knowledge from multiple disciplines and experiences to address unscripted real-world problems. Integrative learning—“integrative” connoting an active process—is what students experience when faculty/staff are more intentional in designing the connections in the curricula and co-curricula and more explicit about that design and the learning goals upon which it is based.
The strongest conviction of the LET is that CU Denver can raise undergraduate learning, enhance students’ sense of belonging, improve retention and completion, and heighten the academic quality and the identity of our university by working collectively on reforms to increase integrative learning.

Recognizing that these issues are not limited to any one school or college but rather only can be pursued fully on behalf of all undergraduates across the undergraduate experience considered as a whole, the LET began over a year ago to invite all schools/colleges and student-service offices to become partners in this conversation. A natural partner was John Lanning and the Office of Undergraduate Experiences (OUE), which oversees a range of programs, such as first-year seminars, undergraduate research, and experiential learning, that are recognized nationally as High-Impact Practices (HIPs) because they are inherently integrative across disciplines, general education, co-curriculum, and community/professions.

The LET therefore asked to partner with OUE in fall 2013 on the 9th annual UE Symposium, “Making Integrative Learning Ours” (MILO), summary reports from which appear in Appendix O. The follow-up meeting with the UE Symposium table-leaders, representing all Denver-campus schools/colleges and most student-service offices, resulted in an action plan for ongoing consultation and a survey to all symposium attendees (Appendix P), culminating in a spring 2014 UE mini-symposium. Over 30 faculty and staff attended, including Chancellor Don Elliman, who expressed strong support (see Appendix Q for the summary). The campus-wide conversation will continue in fall 2014 with the 10th annual UE Symposium, which will have the same focus on integrative learning and the methods for further developing it, including the ELOs and the HIPs (Appendix R lists the HIPs). The work started by the LET will continue through Undergraduate Experiences and all of our partners, hopefully including all schools/colleges and certainly including many Student Affairs offices.

Creating a common vision of the undergraduate experience as a whole and an action plan for generating integrative learning structures and practices across campus is not without obstacles. There is a natural tendency of schools/colleges and of faculty culture to be discipline-centric and defensive around disciplinary and student-credit-hour territories. There is a long-standing academic culture that views “general education” as less important than disciplinary content, something to be gotten out of the way early rather than as something that when combined with disciplinary focus can enrich student learning of both content and essential skills and dispositions. There is an understandable fear that integrating shared learning outcomes such as the ELOs into majors might reduce coverage of disciplinary content, though there are good examples of how to spread the teaching/learning of essential skills and dispositions into the disciplines without cutting down on major credit hours. And, there is a justified fear among tenure-track faculty that giving more time and attention to the teaching-learning mission is not supported by the current CU Denver incentives and rewards system for faculty or by faculty culture.

The Office of Undergraduate Experiences and the LET members are not discouraged by these understandable concerns, and the recommendations that follow take them directly into account. Two and a half years of study and consultations, discussions and planning, have shown us that it can be done. First, hundreds of other universities successfully have or are implementing the recommendations below. Second, the majority of faculty and staff on our campus generally support the principles for which the LET has been advocating. Increasing integrative learning, teaching essential skills and dispositions, sharing learning outcomes across all undergraduates, advancing the teaching-learning mission, putting more into teaching development, tuning the faculty incentive/reward system—these generally make sense to most of us. The challenge now is to turn head-nodding into specific reforms, policies, and actions.
II. Recommendations, Action Steps, Resource Requirements

The LET makes the following recommendations as the surest steps for enhancing student learning, which in turn is the surest means for improving student success, retention, completion, and recruiting. The focus is on improving academic quality (as summarized under 2. on page 2 above), and this focus is justified on grounds that include return-on-investment, as supported by both national and CU Denver research (see for example Appendix S). Because these recommendations are relevant to all undergraduates, they are relevant to all schools and colleges, as well as all student-service offices.

Recommendation I: Strengthen the campus culture around teaching and learning.

A. Value faculty development in teaching more highly: Authorize a national search and hire a full-time director of the Center for Faculty Development (CFD) whose scholarly expertise and professional passion is faculty development. Give the campus a leader and activist for the teaching-learning mission and, therefore, for faculty development. View faculty development as the smartest investment in the resource with the highest impact on student learning and retention. Lead actor(s): the provost’s office. Resources: a mandate and salary funding from the provost for this position and necessary staff.

B. Value teaching equally in faculty review, incentives, and rewards: Provide guidelines and training to revise unit bylaws and annual merit practices and inform the deliberations of the Vice Chancellor’s Advisory Committee (VCAC) to level the playing field between research/creative and teaching, not only in theory but in practice, a genuine 40%/40% balance. Charge the CFD with leading this conversation and providing training. Lead actor(s): the provost’s office, schools/colleges, chairs and departments, the VCAC, and the CFD. Resources: a mandate from the provost to schools/college and to the VCAC and mandates by deans and chairs to their units.

C. Prioritize teaching more highly in hiring: Provide all academic units with encouragement, guidelines, and training to hire the strongest teachers, even those for whom being a master teacher is as high a professional commitment as scholarly/creative productivity. This is not to deemphasize research/creative but only to emphasize teaching equally. Charge the CFD with leading this cultural shift. Lead actor(s): the provost’s office, deans, chairs, CFD. Resources: a mandate from the provost’s office and from the deans.

D. Revise the FCQ and the FRPA: Charge faculty governance bodies to review and revise the Faculty-Course Questionnaire and the annual Faculty Report of Professional Activities to more fully represent student (perception of) engagement and learning and faculty teaching engagement, preparation, and development. Lead actor(s): the provost’s office and Faculty Assembly. Resources: a mandate from the provost.

E. Release the study on faculty incentives and rewards: A 2011 taskforce report on faculty rewards has not yet been made available for campus-wide discussion and potential reforms. Lead actor(s): the provost’s office.

F. Market our academic quality and commitment to learning: Focalize the teaching-learning mission and the commitment to faculty and curricular quality in CU Denver identity and marketing. As part of this, widely adopt and publicize the undergraduate educational philosophy proposed in the 2009 Foundations of Excellence project (see Appendix T). Lead actor(s): upper administration, University Communications, and schools/colleges. Resources: a mandate from the provost’s office and the deans.
Recommendation II: Reaffirm campus-wide commitment to the teaching and learning of essential skills and dispositions for all undergraduates in all majors.

A. **Adopt/adapt the ELOs as the campus’s common learning outcomes.** Charge the Office of Undergraduate Experiences (OUE) with collaborating with schools/colleges, Faculty Assembly, and Student Affairs to determine the final list of common outcomes. **Lead actor(s):** the provost’s office, OUE, deans, Student Affairs. **Resources:** a mandate from the provost’s office.

B. **Reconceptualize and Reform the CU Denver Core.** Charge the OUE and the Core Curriculum Oversight Committee (CCOC) with revising the common Core and Core policy to bring them in line with the ELOs and leading the campus through consultation and confirmation of the reformed Core. **Lead actor(s):** the provost’s office, OUE, CCOC, deans. **Resources:** a mandate from the provost’s office.

C. **Market CU Denver’s commitment to delivering essential skills and dispositions to all undergraduates.** Make common learning outcomes a signature of the campus, our guarantee to students, part of what distinguishes the education we offer and our institutional identity. Put them on websites and in marketing communications. Charge University Communications with determining a phrase less politically charged than “liberal learning” but that conveys the university’s commitment to the essential skills and dispositions that all students will need for success, that those are “learning with purpose.” Use that in marketing, as well as in orientation and advising. **Lead actor(s):** the provost’s office, University Communications, schools/colleges, Student Affairs and advising offices.

Recommendation III: Integrate curricula across the entire undergraduate experience.

A. **Integrate the general-education Core into the majors.** Charge the OUE and the deans to collaborate on a process whereby majors and the Core adopt and advertise shared learning outcomes, as judged appropriate by each discipline. For example, programs may consider integrating one or more of the ELOs into their program learning outcomes. Charge the Office of Assessment with providing guidelines and training. Perhaps use the CLAS questionnaire and guidelines (Appendices F and J). **Lead actor(s):** the provost’s office or AVC Academic Affairs, OUE, Office of Assessment.

B. **Integrate the disciplines further into the general-education Core.** Charge the OUE and the CCOC with providing guidelines, for optional use, for creating discipline-grounded courses that deliver essential skills and dispositions through application to major content and that could count for both the major and the Core. Charge the CFD with providing training and support. **Lead actor(s):** the provost’s office or AVC Academic Affairs, OUE, CCOC, CFD.

C. **Make explicit learning outcomes a hallmark of CU Denver’s commitment to undergraduate education.** Charge all academic units and faculty (as well as Student Affairs offices) to explicitly publish learning outcomes at the program and courses levels. Program LOs, which ideally will have integrated ELOs-CoreLOs, should appear on each program website as a promise and selling-point to students: “this is what you will learn.” Course LOs, which ideally will have integrated one or more program LO, should appear in every syllabus on campus. Charge the Office of Assessment with providing guidelines and training for integrating program LOs into course LOs. **Lead actor(s):** the provost’s office or AVC Academic Affairs, the Office of Assessment. **Resources:** a mandate from the provost and the AVC for Student Affairs.

D. **Create more integration of curriculum and co-curriculum.** Charge leaders in both Academic Affairs and Student Affairs to form a committee to design additional ways that co-curricular
activities might be integrated into academic courses and programs. **Lead actor(s):** AVC Academic Affairs, AVC Student Affairs.

E. **Remove institutional barriers to team teaching.** Charge the Office of Administration and Finance (OAF), the Office of Academic Planning (OAP), and/or the Office of Institutional Research and Effectiveness (OIRE) with redesigning the university system for calculating the distribution of student credit hours between academic units such that the system encourages rather than creates barriers to interdisciplinary team teaching across academic units. **Lead actor(s):** the provost’s office, OAF, OAP, OIRE. **Resources:** a mandate from the provost.

**Recommendation IV: Increase student engagement and learning by increasing the availability of High-Impact Practices** (see Appendix R).

A. **Increase opportunities for service learning, community-based learning, and internships.** Charge the Experiential Learning Center (ELC) and the schools/colleges with doubling the current number of each of these before 2020. Charge the ELC with developing workshops on how to integrate experiential learning projects into programs and courses. Charge each dean to charge chairs with preparing a plan for integrating more experiential learning projects into programs and courses; collect and publish these. Charge OUE and Student Affairs with collaborating on a survey/inventory across campus of all current HIPs; use this information to showcase stellar examples for reference by other units. Charge the ELC and OUE with assessing learning in experiential learning projects using selected ELOs and the VALUE Rubrics that accompany them (Valid Assessment of Learning in Undergraduate Education, see Appendix U). Charge OUE and ELC with designing and circulating a potential plan for granting transcripted academic credit for experiential learning projects. **Lead actor(s):** the provost’s office, OUE, ELC, AVC Student Affairs, deans, chairs. **Resources:** a mandate from the provost’s office; funding for the three additional staff in the ELC necessary to pursue these goals: one Program Coordinator and Internship Advisor and two Graduate Intern Advisor positions, as detailed in the proposal in Appendix V.

B. **Create and expand a learning communities (LC) program.** Charge the OUE and counterparts in Student Affairs with building on the fall 2014 pilot of two LCs with the goal that by 2020 70% of all CU Denver freshmen will participate in a First-Year Seminar or LC. See Appendix W for an overview of the fall 2014 LC pilot project. Combine the LC program with a new gateway-courses program to include high-DFW (failure) lower-division courses in LCs, thereby giving those students a higher probability of success. Charge the CFD with providing guidelines and training for faculty preparing to participate in a LC. **Lead actor(s):** the provost’s office, leaders in Academic Affairs and Student Affairs, OUE, CFD. **Resources:** funding through the OUE for faculty to develop/redesign courses and collaborate on creating cross-disciplinary LC course clusters; continued funding for LC student-support services in Academic Affairs.

C. **Expand the first-year seminar (FYS) program and support the development of a transfer-student program.** Charge the OUE with expanding the FYS program and provide funding for new course development by faculty. Charge leaders in Academic Affairs with collaborating with Student Affairs partners to develop and propose a parallel transfer-student program. **Lead actor(s):** the provost’s office, OUE, leaders in Academic and Student Affairs. **Resources:** the provost continue to increase and protect funding for these efforts as they are scaled up.

D. **Create a Writing-in-the-Disciplines Program.** Charge the OUE and the English Department/Composition Program to design and pilot this program. Charge the CCOC, in consultation with English and Composition, with providing guidelines for building writing-
intensive courses that teach writing skills within another discipline for Core credit. **Lead actor(s):** the provost’s office, OUE, Department of English, Composition Program, CCOC. **Resources:** Resources from the provost to compensate Rhetoric and Composition faculty enlisted to serve as consultants, co-designers, mentors, and quality-control monitors.

E. **Increase undergraduate research.** Create and fund a position of Director of Student Research Opportunities, combining responsibilities for managing the existing Undergraduate Research Opportunities Program (UROP) and the annual Research and Creative Activities Symposium (RaCAS), reporting to the Director of the Experiential Learning Center (ELC) (who reports to the OUE). Charge these with doubling current levels of student, faculty, and industry/non-profit participation in student research. **Lead actor(s):** the provost’s office, OUE, ELC. **Resources:** funds from the provost’s office for a new director position.

F. **Increase learning with collaborative assignments and projects:** Charge the CFD with offering guidelines and a workshop on how to build peer-mentoring, group activities, and teamwork into courses and how to teach the accompanying skills to students (rather than merely making group assignments). **Lead actor(s):** CFD.

G. **Encourage the development of capstone courses.** Charge deans to charge each chair with creating, in consultation with her/his faculty, a proposal and design for a potential senior capstone experience that emphasizes project-or-problem-based and context-specific learning and that challenges students to demonstrate relative mastery in disciplinary content and, at the same time, exercise discipline-appropriate skills and dispositions from the ELOs/Core. Collect and publish these. **Lead actor(s):** the provost’s office, deans, chairs. **Resources:** a mandate from the provost.

H. **Integrate awareness of diversity/global learning into more course and co-curricular opportunities.** Continue the ongoing, highly effective work by the Office of Diversity and Inclusion in enhancing university-wide awareness and practices, the Office of International Affairs in providing study-abroad opportunities, the CFD in providing diversity-relevant training for faculty, and the CCOC, which includes in the current Core an International Perspectives and a Cultural Diversity requirement. Charge the OUE with placing a diversity requirement in all first-year seminar courses. **Lead actor(s):** Office of Diversity and Inclusion, Office of International Affairs, CFD, OUE, deans, chairs.

I. **Make ample opportunities for experiential learning and HIPs one of the selling points that distinguishes the CU Denver experience.** **Lead actor(s):** VC for University Communications.
Appendix A

Learning Enhancement Taskforce Members (by dates of service)

The original taskforce members volunteered from the CLAS Chairs/Directors and the CLAS Council. Additional members were recruited to balance representation from CLAS disciplinary divisions. As the conversation spread beyond CLAS, the membership expanded outside the college in spring 2013 and again in fall 2013. Nineteen total faculty and staff served.

Cecilio Alvarez, Academic Advisor, CLAS Advising (1/13-5/14)
Mark Anderson, Professor, Chair of Chemistry (1/12-5/12)
Tod Duncan, Senior Instructor, Biology (1/12-5/14)
Jeff Franklin, Associate Dean in CLAS, Professor of English (1/12-5/14)
Mitch Handelsman, Professor, President’s Teaching Scholar, Psychology (1/12-5/14)
Kelly Hupfeld, Associate Dean in the School of Public Affairs (10/13-5/14, corresponding member)
Khushnur Dadabhoy, Dean of Students, Assistant Vice Chancellor for Student Affairs (4/13-5/14)
Devin Jenkins, Associate Professor, Chair of Modern Languages (4/12-5/14)
John Lanning, Assistant Vice Chancellor for Undergraduate Experiences, Academic Affairs, Professor of Chemistry (3/12-5/14)
Marjorie Levine-Clark, Associate Professor, History (1/12-5/14)
Peggy Lore, Assistant Vice Chancellor for Student Success, Student Affairs (4/13-5/14)
Mary Lovit, Course and Curriculum Coordinator, CLAS Dean’s Office (1/12-5/14)
Lucy McGuffey, Assistant Professor Clinical Teaching Track, Political Science (1/12-5/14)
Brian Page, Associate Professor, Chair of Geography and Environmental Sciences (1/12-5/14)
Paul Stretesky, Professor, School of Public Affairs, Co-Chair of the Core Curriculum Oversight Committee (4/13-2/14)
Christine Stroup-Benham, Assistant Vice Chancellor, Office of Institutional Research and Effectiveness (4/13-5/14)
Diana Tomback, Professor, Biology (1/12-5/14)
William Wagner, Assistant Professor, History (5/13-5/14)
Margaret Woodhull, Associate Professor, Director of the Masters of Humanities Program (1/12-10/13)
Appendix B

The Essential Learning Outcomes+ 1

Beginning in school, and continuing at successively higher levels across their college studies, students should learn:

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 thinking
- Creative thinking
- Written communication
- Oral communication
- Reading
- Quantitative literacy
- Information literacy
- Teamwork
- 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

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1 This list and the accompanying language are from the American Association of Colleges & University (AAC&U) LEAP (Liberal Education and American’s Promise) Program’s “Essential Learning Outcomes,” but slightly expanded in order to represent all of the AAC&U’s VALUE (Valid Assessment of Learning in Undergraduate Education) Rubrics, which is what the inserted “+” indicates.
Executive Summary

This document is the first-year interim report of the College of Liberal Arts and Sciences (CLAS) Learning Enhancement Taskforce. The charge to the taskforce was to consider reform of any aspect of liberal arts and sciences education or CLAS structure and operation that would improve undergraduate student learning. The first taskforce recommendation is that CLAS adopt as our shared, highest-order learning goals the “Essential Learning Outcomes” (ELOs) from the American Association of Colleges and Universities. How might it change our conception and delivery of undergraduate education if the entire college chose to share one set of learning goals and embrace collective ownership of the undergraduate experience as a unified whole? This approach recommends attention to the levels of intentionality behind our curricula and pedagogies and the levels of integration of the entire curriculum. How can we be more purposeful in the design of our curriculum and make the experience of our students more cohesive? Attention to these issues will positively impact the quality of student learning and engagement, which in turn will sharpen institutional identity and contribute to recruitment and retention, particularly as we make explicit the vocational value and necessity of a liberal arts and sciences education. Focusing on the ELOs will provide a heuristic device for self-study, discussion, and planning: what are our most deeply held learning goals for our students and what reforms should we be considering to better deliver those outcomes? These questions should involve all CLAS and other interested CU-Denver constituents in a dialogue about the design of the liberal arts and sciences education that would be optimal for the future needs of our students and of society while remaining appropriate to the culture and aspirations of CU Denver.

I. Taskforce Rationale and Purpose

We—the faculty, staff, and students in CLAS—have an important opportunity, made available by the mandate of this taskforce. That opportunity is to rethink and, potentially, redesign the liberal arts and sciences education that we offer in order to better meet the needs of our students, our society, and our world.

That opportunity may also be an imperative. A nation-wide dialogue has been underway for several decades focused on the outcome of traditional higher education curricular and pedagogical methods in the liberal arts and sciences. A consensus is emerging among college educators, many faculty, administrators, and employers. They have concluded that our higher educational system is failing to prepare a significant portion of the undergraduate population. Too many students are graduating without the skillsets and knowledge necessary to meet the needs of the public and private sectors, or the current and future needs of society. There is a national imperative to reconsider the design of the liberal arts and sciences education.

The predominant model and delivery of a liberal education in many U.S. universities, perhaps including ours, is largely the same as it was 50 years ago. Virtually everything else has changed: student preparedness, diversity, and finances; exponential growth in knowledge and information; job market needs and employer expectations; and globalization of culture and society. National research indicates that many students are not learning fundamental skills like writing and quantitative reasoning; at the same time, the demand for these skills, and others unique to a liberal education, is increasing. Employers and society require universities to prepare citizens who can adapt to change, communicate at a high level,

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2 First-person collective pronouns always refer in this report to all CLAS faculty, staff, students, alumni, etc., never only to the taskforce members.
integrate and guide the latest in science and technology, critically evaluate unexamined and unsupported beliefs, reason ethically about social conflicts, embrace diversity and globalization, and apply these skills to solve complex, real-world problems.

It is time for CU Denver to reexamine how we define and implement a liberal arts and sciences education, time to join the national conversation about the value and purposes of that education. Recognizing the importance of our scholarly/creative mission and the tremendous advances we have made there, it now is time to bring the same level of attention and effort to the teaching/learning part of our mission. That is the focus of this taskforce, and it should be aided by the fact that most of our faculty care deeply about teaching and learning.

The purpose of this report is first to brief the faculty, staff, and students of CLAS, as well as other interested stakeholders, on the work of this taskforce at the end of its first year. The second purpose is to present the first recommendation of the taskforce and the rationale behind it. That recommendation is that the college adopt as its highest-order learning goals for all undergraduate students, regardless of major or professional goals, the “Essential Learning Outcomes” from the American Association of Colleges and Universities (AAC&U), which are listed in Appendix. . .and discussed below. And the third purpose of this report is to initiate a dialogue with all interested stakeholders centering on the following questions:

1. What do our students most need to learn in the context of what will be most valuable and useful to them and to society?
2. What changes to our current curricula and pedagogies should we be considering in order to provide that learning?
3. How would adoption of the Essential Learning Outcomes inform our considerations and structure any changes we may choose to pursue?

The taskforce members, listed in Appendix. . ., are ready to facilitate and learn from this conversation. This work has the potential to create a model of undergraduate education that is our own and an identity that further distinguishes us from Boulder, DU, CSU, and Metro, thereby increasing retention rates and attracting more high-quality students to make us their first choice. But the foremost purpose is to enhance student learning and engagement to better prepare them for anything and everything they will do next.

II. Background: Trends in Higher-Education Reform

Education scholars as well as employers increasingly argue that now more than ever a liberal education, rightly understood\(^3\), is essential for all students in all types of educational institutions as necessary preparation for all professions and for student success, citizenship, and a fulfilling life. This represents a significant reversal of the conventional but dated view that a liberal education is a non-vocational pursuit for the privileged who can afford it.

Our students are likely to have 10-14 jobs by the time they are 38, and 30 million Americans are working jobs that did not exist in the prior quarter.\(^4\) Our students need to become adaptive and innovative critical thinkers who leave college not only with depth of knowledge in a discipline but, more importantly, with non-discipline-specific transferable capabilities, such as those represented by the Essential Learning

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\(^3\) One definition of “liberal education” from AAC&U, *The LEAP Vision for Learning*: “An approach to college learning that seeks to empower individuals and prepare them to deal with complexity, diversity, and change. This approach emphasizes broad knowledge of the wider world (e.g., science, culture, and society) as well as in-depth achievement in at least one specific field of study. It helps students develop a sense of social responsibility, strong cross-disciplinary intellectual and practical skills (e.g., communication, analytical and problem-solving skills), and a demonstrated ability to apply knowledge and skills in real-world settings” (3).

\(^4\) Data are from the U.S. Department of Labor, quoted in Humphreys and Carnevale, “The Economic Value of Liberal Education,” 5.
Outcomes. In a 2007 survey of over 600 employers with at least 25 employees, 69% said that these skills are “very important” for prospective employees to learn in college, and another 26% said they were “fairly important.” Based on analysis of data on 1,100 different jobs, which shows a correlation between salary level and competency level in these skills, the Georgetown University Center on Education and the Workforce concludes, “Irrespective of college major or institutional selectivity, what matters to career success is students’ development of a broad set of cross-cutting capacities.”

On the basis of such findings, the National Leadership Council for Liberal Education and America’s Promise, composed of eminent university and business executives, “challenges the conventional view that liberal education is, by definition, ‘nonvocational’” and “urges a new recognition that, in this global century, every student—not just the fortunate few—will need wide-ranging and cross-disciplinary knowledge, higher-level skills, an active sense of personal and social responsibility, and a demonstrated ability to apply knowledge to complex problems. The learning students need is best described as a liberal—and liberating—education.”

It never has been more important for individual and social wellbeing to champion and strengthen the value and accessibility of a liberal education. It is time that we in the liberal arts and sciences shift from a passive, often unsupported posture in the face of those who contend that a professional degree is more “useful” to a position of evidence-based advocacy for what we do.

In response to this call, hundreds of U.S. universities and colleges have reformed their undergraduate education. The taskforce has been studying case examples. It has observed some clear trends of reform across institutions. These include: general education reform from a distribution model to a capabilities-and-dispositions model, horizontal curriculum integration across disciplines and the core, vertical curriculum integration both within majors and in general education, implementation of “high-impact practices,” and the use of learning outcomes assessment to guide faculty decisions about curricula and pedagogy. Further definitions of these appear in Appendix. .

These reforms are guided at a broader level by three recurring themes: 1) increased responsibility by both faculty and students for improving student learning; 2) increased intentionality in faculty design of curricula and in student plans of study; and, 3) increasing integration of curricula, teaching, and learning across majors and between majors and core.

One paradigm shift in American education is from quantitative models of education toward qualitative models of learning. At an exaggerated extreme, the quantitative model has students and faculty checking off requirements—credit hours, quantity of content covered—and then assuming that learning has taken place. This model is tied to a teaching-centric pedagogy almost solely reliant upon lecturing to deliver content to passive listeners. A qualitative model is based on a more learning-centric pedagogy of guiding students in engaged learning, as much of skills and dispositions as of content. Ideally, students will demonstrate their learning at a higher level than a standardized test can represent, whether by performance, project, portfolio, deep textual or data analysis, research, the writing process, or real-world application (which raises special difficulties for high-enrollment courses). The faculty—supported by sufficient institutional resources—must demonstrate not that a certain amount of teaching has taken place, measured by contact hours, but that improvement or mastery in learning has occurred. This requires faculty to articulate what they want their students to learn (beyond simply stating course requirements), develop the best methods for inviting that learning, and then demonstrate through assessment whether or not students have achieved those learning outcomes.

7 National Leadership Council, College Learning for the New Global Century, 4, 11.
This increased responsibility points to the need for greater intentionality. An intentional pedagogy and curriculum make the learning goals explicit. It is easy to assume that a course teaches writing or scientific reasoning skills, but the teaching and learning are not fully intentional unless the syllabus states this, the students understand this, the assignments/activities that provide this are specified, and the criteria for assessing it made explicit. An intentional curriculum is purposeful as a whole, designed to provide a coherent educational experience with a beginning, middle, and culmination. Whereas curricula sometimes appear as an episodic “campus ‘autobiography,’” the legacy created by faculty members who have come and gone over the years,” a more intentional curriculum no longer consists of “checklists of requirements but flow charts and diagrams showing relationship among course clusters, skills and in-class and out-of-class experiences.”

The goal of faculty intentionality is to raise student intentionality about their learning.

Greater intentionality points to curricular integration. Integration means creating meaningful linkages between more of the components of the undergraduate experience: within the major, between the core and the major, between different majors and across all majors, and including “extracurricular” learning experiences. The segregation of major from major and majors from the core, combined with a laissez-faire system in which students often choose courses from a vast menu based on scheduling convenience, can result in “a fragmented and incoherent educational experience rather than steady progress toward deeper and more integrated understandings and capacities.” Enforced prerequisites are a start, and a multi-stage sequence of progressively more challenging courses in all majors would be an advance, but some institutions have designed curricula that go much further in integrating the entire undergraduate experience. These provide examples that we can choose to adopt or adapt or not, as is appropriate to our needs and context.

To give one example, 25 years ago Portland State University (PSU) undertook a complete curricular overhaul. Since then, its enrollments and retention rates have continued to rise, and it now has a state-wide and national reputation. PSU formed the University Studies Program to manage all general education. It adopted a new core of four, trans-disciplinary learning goals: Inquiry and Critical Thinking, Communication, Diversity of Human Experience, and Ethics and Social Responsibility.

It instituted a Freshman Inquiry program, a year-long sequence of linked courses based on “big idea” themes, such as Design and Society, Human/Nature, and Race and Social Justice. It designed the Sophomore Inquiry program as gateway courses that lead to specific Upper Division Clusters, as well as related discipline-specific courses. And it required a Senior Capstone in which “students bring together the knowledge, skills, and interests developed to this point through all aspects of their education, to work on a community project.”

PSU increased peer mentoring, learning communities, and experiential learning. It necessarily redesigned course scheduling, advising, transfer-student management, and other services.

PSU has been followed by other universities—ranging from Stanford to St. Olaf College—most of which have sampled and customized, often drawing upon the Essential Learning Outcomes. The taskforce does not assume that any of these reforms are right for CLAS-UCD. The taskforce does assume, however, that it is both right and necessary to initiate this conversation and to consider options that experience, research, and outcomes support.

III. Recommendation #1: The AAC&U Essential Learning Outcomes

The taskforce spent its first phase in self-education: reading, speaking with faculty and administrators at other universities, consulting with national scholars on directions in higher education, and brainstorming about possibilities and priorities (see Appendix. . ., “Taskforce Reading List in Progress”). Discussions ranged across the entire spectrum of topics, from general education to student-learning styles to advising

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8 Ferren, “Intentionality,” 26, 29.
9 National Leadership Council, College Learning for the New Global Century, 19.
to curricula to state law to transfer students to co-teaching to institutional brand, etc. All pertain to student learning and engagement; therefore, reform might be considered at every level and in every office. Where then to begin work?

A fundamental tenet of instructional design recommends that we begin by focusing on the expected learning outcomes, starting with the highest-order learning goals for all undergraduates, from which the optimal curriculum then could be reverse-engineered. The taskforce investigated the current state of general-education reform, comparing sample lists of gen-ed requirements from multiple institutions, some of which appear in Appendix... (along with the CU-Denver Core Areas for comparison). Though many permutations exist, overlap predominates. Indeed, research shows that between 99% and 75% of institutions interviewed report gen-ed coverage of these outcomes, in descending order: writing skills, critical thinking, quantitative reasoning, oral communication, intercultural skills, information literacy, and ethical reasoning, followed closely by civic engagement, applications of learning, research skills, and integration of learning.12

The taskforce debated whether to design CU-Denver-specific learning outcomes or adopt those of another organization. The high degree of overlap among lists suggested strong consensus about what students should learn, but also that no institution’s learning outcomes are necessarily superior. The Essential Learning Outcomes rose to the top for several reasons. They received preliminary approval by the CLAS Chairs/Directors. They are inclusive in two senses: i) they encompass the learning outcomes from most universities; ii) they permit consideration of all elements of the undergraduate experience, not only the major and general education but also the educational value of everything from advising to campus life to service learning.

The ELOs are the product of years of scholarship and consultation by the AAC&U (est. 1915). The AAC&U is the leading national organization that researches and champions liberal education, with over 1,250 member institutions, including CU-Denver.13 One of its signature programs is LEAP—Liberal Education and America’s Promise—in which 100s of universities/colleges and several state university systems participate. LEAP undertook the design of essential learning outcomes through a multi-year, multi-institution faculty consultation and vetting process. LEAP then enlisted faculty across institutions within the most relevant disciplines to develop a VALUE rubric for each learning outcome (two sample VALUE rubrics appear in Appendix...).14 The purpose was to provide an authoritative method of demonstrating student learning at the level intended by faculty (rather than the levels to which standardized tests can reduce learning) and, therefore, arm universities to defend, in their own terms, the value of a liberal education in political contexts that may not always be supportive. The taskforce selected the ELOs because of the endorsement by faculty in many universities and the infrastructure and tools that come with them.

IV. Self-Study Phase 1: Initial Questions and Preliminary Findings

In order to determine the fit of the ELOs with our own stated goals, the taskforce analyzed them in relation to the CLAS Strategic Plan 2008-2020 and the CU-Denver Strategic Plan 2008-2020. Not surprisingly, the ELOs strongly align with CLAS priorities, starting with our Mission: “To foster academic excellence, to create and impart knowledge critical to a modern society and a global economy, and to ensure the acquisition of skills essential for professional careers and graduate study.”15 The parallels with certain ELOs are obvious. The premise of the LEAP program as a whole is that a liberal education guided by outcomes like the ELOs is the best preparation to fulfill that mission. Further, the CLAS Vision could be the charge for this taskforce: “By 2020, CLAS will have enacted a new paradigm

for a liberal arts education that retains the proven values of a broad education while imparting career-oriented skills throughout the curriculum.” Appendix. . ., “Notes on Alignment of the ELOs with the CLAS Strategic Plan 2008-2020,” provides additional evidence of the affinity between the ELOs and CLAS goals.

The ELOs also are consonant with the University’s goals and priorities. At least three of the five guiding Values behind the CU-Denver Mission—“Learning and Scholarship,” “Diversity, Respect, and Inclusiveness,” and “Citizenship and Leadership”—have corollaries among ELOs, such as Knowledge of Human Cultures and the Physical and Natural World, Problem Solving, Civic Knowledge, Intercultural Knowledge, Ethical Reasoning, and Lifelong Learning. These Values require that emphases be placed on “a continuous process of inquiry, critical thinking, reflection, collaboration, and application.” A number of the ELOs—Inquiry and Analysis, Critical Thinking, Creative Thinking, Teamwork, Integrative and Applied Learning—are deliberately called-out in the CU-Denver Strategic Plan.

The strongest corollaries between the Strategic Plan and the LEAP project appear under “University Strategic Priority 2: Deliver an outstanding and innovative educational experience.” UCD shares with LEAP a commitment to “expand teaching and learning innovations and conduct research to determine the effectiveness of alternative pedagogies and delivery modes,” and this taskforce is part of that research. Both are committed to “broaden[ing] the educational experience for students to improve student success” in career and society by connecting the classroom to the community and to real-world problems through experiential learning. But the Strategic Plan also recognizes that such big claims are made too easily unless backed by “evidence-based systems to measure and assess educational quality and student success.” The VALUE rubrics that accompany the ELOs provide just such a system, one designed to more closely approximate the quality of learning that faculty expect.

A second form of self-study undertaken thus far by the taskforce was to survey the CLAS Chairs/Directors. They received a presentation and report including the “Selected Common Reforms across U.S. Higher-education Institutions” (Appendix. . .) and then were asked a series of questions to gauge their interests and concerns (Appendix. . .provides the questionnaire). The taskforce collected, transcribed, and analyzed the responses (which are available on request). Among diverse responses, some trends were discernable.

When asked how a more vertically integrated curriculum could be achieved in their program, they roughly concurred that the scaffolding of the curriculum should be made explicit, providing discrete pathways upward through a series of courses that are cumulative. Many mentioned publicized and enforced prerequisites. Several called for making program learning goals more explicit, designing curriculum to deliver that learning in discrete stages, and, as one put it, “assess[ing] skills and knowledge in [a] developmentally progressive manner.”

In response to the second through fifth questions, concerning university-wide and horizontal integration of curricula, a number of program heads pointed to one or more of these: a freshman experience or required foundation course(s), clusters of courses around “big idea” themes, as much focus on skills as content in these courses and clusters, and more interdisciplinarity and co-teaching. Each of these would require greater coordination across units and institutional incentives and rewards, the paucity of which was a shared concern. Civic engagement, globalization, diversity, and “science and public policy” (e.g., evolution, climate change, public health) were the most mentioned themes for course clusters. The group

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16 UCD, Strategic Plan 2008-2020, 8.
17 UCD, Strategic Plan, 8.
18 All quoted passages in this paragraph are from the UCD Strategic Plan, pp. 19-22.
was almost unanimously in favor of writing-intensive and, less strongly, quantitative-reasoning courses across disciplines.

When asked to select a preferred set of learning outcomes given a range of choices from other institutions (listed in Appendix...), the largest number of program heads chose the LEAP project ELOs, with the second most common choice being those from the University of Nebraska-Lincoln. There is significant overlap between those two sets of learning outcomes.

Answers to the last two questions suggest that many chairs/directors share practical concerns about the challenges of implementation, economic feasibility, and the availability of faculty incentives/rewards to undertake broad reforms. A number urged thorough consultation with faculty, academic units/disciplines, and students. Most found the discussion of change timely and welcomed consideration (though not yet implementation) of the types of reforms discussed.

The last of the three self-study inquiries to date was this: To what extent do current, explicitly articulated CU-Denver and CLAS learning goals align with the ELOs? The taskforce compiled the learning outcome statements from all CLAS major programs as well as from the nine CU-Denver Core Areas. Comparative content analysis identified overlaps and gaps between our existing outcomes and the ELOs. The analysis was informed by reference to the LEAP Value Rubrics, which give depth and specificity to the ELOs, but it was literal in that some degree of match or equivalency in the actual language of the respective outcome statements was a primary criterion. The taskforce assigned each ELO a color-code and mapped those onto our outcome lists (summary data appear in Appendix... and the full results are available upon request). Given the subjectivity involved in the analysis, the findings must be considered only suggestive.

The taskforce found that there is significant overlap between the ELOs and our learning outcomes when the CLAS programs plus the Core are considered collectively and in their entirety. Most, not all, of the ELOs can be found somewhere among our 30 lists of outcomes.

The taskforce observed that some majors appear to address multiple ELOs and some to offer none. Certain ELOs may be underrepresented across our majors: Creative Thinking, Oral Communication, Reading, Quantitative Literacy, Information Literacy, Teamwork, Problem Solving, Ethical Reasoning, Foundations and Skills for Lifelong Learning, and Integrative and Applied Learning. These ELOs may well be valued in our programs but not made explicit in our learning goals and, therefore, may not be presented by faculty nor perceived by students as important to their success during and after university. From the LEAP perspective, our programs are not sufficiently intentional about offering learning in these areas.

However, it is interesting to note that CLAS majors appear to cover the ELOs more thoroughly than does the CU-Denver Core. It seems counter-intuitive that our explicitly articulated Core learning goals might be less congruent with some of the most frequently named and nationally recognized general-education learning goals. Some of the ELOs appear to be entirely absent from those explicit in the Core, namely Oral Communication, Information Literacy, Teamwork, Ethical Reasoning, and Integrative and Applied Learning. The Core also may have less emphasis than the CLAS programs in several cases: Written Communication, Reading, Problem Solving, Ethical Reasoning, and Foundations and Skills for Lifelong Learning. These preliminary findings should not be considered definitive, but they invite us to question which learning goals we most value and where we believe those should appear in our curricula.

Although some students may complete courses of study at CU Denver wherein they are exposed to all of the ELOs, it also is possible and even likely that many students are not exposed to some number of these learning outcomes. Overall, there is a high degree of randomness in our system, or a low degree of intentionality in curricular design; therefore, the outcomes for our students are less uniform than we might wish, at least if we choose to take the ELOs as a benchmark.
In sum, adoption of the ELOs would support our University and College missions; the CLAS chairs/directors are largely interested and supportive of this approach; and, adoption of the ELOs could result in significant and constructive reforms to the undergraduate education we offer our students.

V. Next Steps

The taskforce proposes that the CLAS community, starting with the academic units, use the ELOs as a heuristic device to study our own values and priorities for student learning.

How do our learning goals for students compare/contrast to the ELOs? Which of our valued learning goals are explicit in our program descriptions, syllabi, and websites and which are not? In what ways would the ELOs require modification to better match the culture, context, and strengths of our institution? Where in the curricula are our priority learning goals offered, whether through general-education, majors, or both? How do we know if our priority learning goals become learning outcomes; how do we determine if our students are learning what we say we want them to learn? What would be the impact if we shared one common set of learning goals/outcomes for all undergraduates? How would collective ownership of the whole undergraduate educational experience change what we do?

The taskforce does not assume that it knows all of the answers to the above questions, nor even the best methods for gathering the additional information needed to guide our collective deliberations. The point of the proposed heuristic exercise is for all of us to learn what we currently are doing and to decide whether there is a more effective model for student learning. The taskforce’s role in this exercise is to initiate, facilitate, consult—not to dictate. The taskforce members hope to make all CLAS faculty into co-investigators in this social-science research project in which we are both the investigators and the subjects.

The next steps that the taskforce conceives for itself, realizing that these may be modified through the consultation process, are as follows:

1. Initiate and facilitate conversations with the academic units and faculty governance bodies, broadening as feasible to include students, staff, alumni, and other stakeholders.
2. Summarize the national dialogue and research findings outlined in this document to each academic unit in the college, as well as to primary faculty governance bodies.
3. Consult, listen, and gather feedback from units and faculty—this is primary.
4. Gather any additional data that the faculty and the taskforce agree would aid this process.
5. Synthesize and report the findings of this process back to the faculty and other stakeholders.
6. Frame the recommended actions that emerge from this process and its findings.

The next steps that the taskforce requests of the academic units and faculty are as follows:

1. Welcome a taskforce presentation at a future meeting of your unit or faculty body.
2. Serve as consultant to the taskforce on what questions we should be asking, what data/information we need to inform our thinking, and the best ways of gathering that.
3. Analyze your unit’s most valued learning goals/outcomes in relationship to the ELOs, draw your own conclusions, and share those—or guide the taskforce in doing this.
4. Evaluate the degrees of intentionality and integration in your major curriculum, draw your own conclusions, and share those—or guide the taskforce in doing this.
5. Serve as consultant to the taskforce in evaluating the degrees of intentionality and integration in our undergraduate curriculum considered in its entirety.
6. Think outside the box—outside the interests of program/major—about the purposes and impacts of the undergraduate liberal arts and sciences educational experience as a whole.
The taskforce is recommending no changes or actions at this point beyond consideration of whether to adopt the ELOs. It is requesting a willingness to listen, advise, self-reflect, and brainstorm on issues about which we all care deeply. What if we could offer the undergraduate education that we believe is in the best interest of our students and of society? Imagining that educational experience may require giving ourselves permission to suspend, if only for a moment, the contextual and financial realities to which we all know we will have to return. Cognizant of practical constraints, we still can seize the opportunity to reimagine what a liberal arts and sciences education could and should be and then, if we collectively concur that doing so is warranted, to redesign the educational experience we provide.
Appendix D

Survey of CLAS Chairs & Directors
annual fall retreat, 13 August 2012

Instructions: Form groups of three to four. Work through the questions below in consultation with your group members. But, write down your own answers on this sheet. We will take these up at the end. We recommend that you leave this form anonymous, but suit yourself. Please write legibly.

1. If your undergraduate major/program decided to make your curriculum more vertically integrated, what might you do, change, or create? Please give a specific example(s).

2. If the University decided to make the undergraduate curriculum and experience as a whole more vertically integrated, what might we do, change, or create? Please give a specific example(s).

3. If the University wanted to make the undergraduate curriculum and experience more horizontally integrated, what would we do, change, or create? Please give a specific example(s).

4. If you were asked to propose a “big idea” cluster of thematically (or otherwise) related courses from multiple departments as part of a new “freshman experience,” what would you propose? Give a title and sample courses.

5. What would you think about writing-intensive and quantitative reasoning courses and requirements in most disciplines/departments, spread across the whole College?

6. Which of the attached lists of general-education learning goals or outcomes seems nearest what you would design (in an ideal world where whatever is best can be implemented)? Please specify with a Roman numeral on this page. If “none of these,” take a crack at it or say your piece. [The chairs were provided with lists of learning outcome categories from these sources: Harvard, SUNY, AAC&U ELOs, U Nebraska Lincoln, a list created by the LET, Stanford, and CU Denver Core Areas, but without identifying the sources.]

7. What question or issue do you think the taskforce should pay particular attention to?

8. What data should the taskforce gather to better understand the current state of things at UCD-CLAS? And/or, what steps or process would you recommend for the taskforce in consulting with the various constituencies?
Appendix E

Summary of Faculty Responses to LET Spring 2013 Presentations

Based on LET’s qualitative evaluation of notes taken during presentations, CLAS faculty:

- Know that some faculty across the college already are offering the learning of the ELOs, making program learning goals explicit to students, scaffolding major curriculum, etc.
- Agree that the quality of the educational experience we offer determines institutional identity and competitiveness—it may be time for a more distinctive educational brand.
- Approve a more cohesive learning experience for our students and so support integration of our curricula and services horizontally across units/programs and vertically through scaffolding and intentional pathways;
- Agree that the CU Denver Core could be improved by shifting from a disciplinary distribution model to a skills-and-dispositions model (but are uncertain whether that reform is worth the effort).
- Are committed to serving the demographics of our students—commuting, transfer, first-generation, working, diverse, etc.
- Believe that the incentive and reward systems at CU Denver will need to undergo more than cosmetic changes to truly support teaching commitment, innovation, and rigor.
- Are skeptical that upper administration will support meaningful reforms with incentives and rewards commensurate with the work required.
- Generally support and appreciate the work and direction of the LET.
Appendix F

Questionnaire Administered to All CLAS Faculty, spring 2013

Survey Question #1: How valuable to their future success and contribution to society do you think it is for undergraduate students to learn each of these skills and dispositions? Results:

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Appendix G

LET Timeline, Selected Activities 2011-2014

1/2012 LET receives the charge from Dean Dan Howard.

Spring 2012 LET conducts research and consultations, reading reports from other universities, including Stanford, Harvard, and Portland State, and speaking with faculty and administrators at several universities.

4/2012 LET hosts Dr. Terry Rhodes, Vice President for Quality, Curriculum, and Assessment from the Association of American Colleges & Universities (AAC&U), for a two-day symposium.

5/2012 LET submits first interim report.

8/2012 LET presents to the CLAS Chairs/Directors Retreat and surveys them concerning overarching learning outcomes and potential reforms (see Appendix D for the survey, and Appendix C includes a summary of responses).

1/2013 LET conducts a comparative analysis of the Essential Learning Outcomes (ELOs, in Appendix B) to both the CLAS and the CU Denver strategic plan documents in order to determine compatibility (see Appendix J and Appendix C, respectively).

1/2013 LET submits second interim report (see Appendix C).

Spring 2013 LET members deliver over 20 presentations to CLAS departments, CU Denver faculty/staff committees, upper administration, and Student Government, consulting with each.

Spring 2013 LET surveys CLAS faculty (approx. 280) concerning which of the Essential Learning Outcomes (ELOs) are most important for students to learn and which the academic unit delivers (see Appendix F), receiving a 78% response rate.

Spring 2013 LET produces and circulates a comparative analysis of the ELOs to the CLAS program learning outcomes and those of the nine CU Denver Core Areas in order to determine alignment and compatibility (Appendix I).

7/2013 LET sends a team of six members to the four-day AAC&U Institute on Integrative Learning and the Departments: Faculty Leadership for the 21st Century at Portland State University (see Appendix H).

8/2013 LET updates and consults with the CLAS Chairs/Directors at their August Retreat.

8/2013 LET provides department-specific reports from the spring 2013 survey (example in Appendix K) and asks each unit to compare/contrast its existing program LOs to the ELOs its faculty highly value and believe they teach and integrate one or more of those ELOs into their program LOs (see Appendix L).

10/2013 LET collaborates with the Office of Undergraduate Experiences on the annual Undergraduate Experiences Symposium (UES), “Making Integrative Learning Ours,” with Dr. Terry Rhodes as the keynote speaker (see Appendix O).
11/2013 LET follow-up meeting with the UES Table Leaders, representing all other DDC school/colleges and multiple Faculty Affairs offices.

12/2013 LET presentation/consultation with CU Denver Faculty Assembly.

12/2013 CLAS Dean’s Office, at the request of the LET, offers $200 to any faculty member who integrates ELO/Core or their own program’s learning outcomes into their course learning outcomes and link those outcomes to assignments and grades. Thirty-one faculty applied; 20 grants were made.

Spring 2014 LET requests that each CLAS department scaffold its courses in relationship to its revised program learning outcomes, creating the stair-steps in a cumulative learning pathway for its majors (vertical integration) (example of format and guidelines in Appendix M).

1/2014 LET presents to and consults with Provost Nairn and the CU Denver Deans’ Council.

5/2014 LET consults with Jordan Alvarez, CU Denver Student Body President.

6/2014 Preparation and submission of LET final report.
Appendix H:

University of Colorado Denver Action Plan: Making Integrative Learning Ours (MILO)

From the AAC&U Summer Institute
“Integrative Learning and the Departments: Faculty Leadership for the 21st Century”
Portland State University, 10-14 July 2013

Background
Our team is made up of four members of the Learning Enhancement Taskforce (LET), which is over a year into a project, charged by the Dean of CLAS, to consider what reforms to recommend for improving student learning; one member from Institutional Research; and one member of the Core Curriculum Oversight Committee.

- Cecilio Alvarez, Academic Advisor, College of Liberal Arts and Sciences (CLAS), LET Member
- Tod Duncan, Senior Instructor of Biology, CLAS, LET Member
- J. Jeffrey Franklin (Team Leader), Professor of English and Associate Dean of Student Affairs, CLAS, LET Member
- Marjorie Levine-Clark, Associate Professor of History and Associate Dean of Planning and Initiatives, CLAS, LET Member
- Paul Stretesky, Professor of Public Affairs, Chair Core Curriculum Committee
- Christine Stroup-Benham, Assistant Vice Chancellor for Institutional Research and Effectiveness

We are evaluating existing outcomes, curricula, and assessment, and shaping strategies to move toward implementation of pedagogical changes, curricular redesigns, and assessment processes. The LET has made about twenty presentations focused on the question of what difference it might make for the College of Liberal Arts and Sciences (CLAS) (and, by implication, the entire campus) to adopt the Essential Learning Outcomes (ELOs). Our audiences have been academic units in CLAS, student and faculty governance bodies, and upper administration committees. We have collected data through the presentations and through a questionnaire to all CLAS faculty. These data revealed a great deal of support for the ELOs. We now need to figure out next steps, leveraging the faculty consensus and administrative support, to construct a roadmap to significant reforms.

Project Description and Goals
Our overall goal is to adopt an integrated university-wide curriculum to enhance student learning that becomes the defining identity of a University of Colorado Denver educational experience. We want the University to adopt the ELOs (in a student-centered language), to make learning goals explicit at all levels, to scaffold curricula, and to demonstrate that students are learning what we say we want them to learn. We want to develop a culture of integrative learning for which everyone takes responsibility and through which students, faculty, and staff are excited about CU Denver education.

Process Goals: The Institute helped us construct key short, medium, and long-term goals, using a quadrant grid to think about impact on student learning and difficulty of implementation. We intend to move quickly toward the implementation of our high impact/not PITA (pain in the a**) immediately, as well as some of the lower impact goals that we can easily accomplish. We will continue to work on the other high impact goals that will require more political, financial, persuasive-power, and time investments, aka PITA. Some of the goals marked “low impact” relative to student learning relate to specific projects that include data gathering and creating a more inclusive environment for students that might not directly impact student learning but are important to our overall goals.

Barriers to Accomplishment
The barriers we have identified include the fairly typical ones of inertia among faculty and lack of resources in terms of money and time. We are unsure that schools and colleges outside CLAS will support reforms. We also have major structural barriers due to Colorado’s guaranteed transfer system, so that any major revision of our “core” requirements would need to fit within a framework that is not ideal for the direction we would like to see CU Denver go. We also worry about sustainability of leadership to champion the project.

**Opportunities to Support**

We already have CLAS faculty buy-in for ELOs and commitment from chairs in CLAS to do something to advance these efforts. Our annual Undergraduate Experiences Symposium in the fall will focus on the work of the LET, which will help further publicize the ELOs and our goal of more integrated learning.

**Communication Strategy**

See table below.

**Team Actions and Timeline**

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<tbody>
<tr>
<td><strong>Data Generation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continue to generate and gather appropriate data to evaluate and inform decision making</td>
<td>Christine, Tod</td>
<td>Develops evidence to illustrate benefits (or not) of HIPs and other learning experiences</td>
<td>Fall 2013</td>
</tr>
<tr>
<td><strong>CLAS Department Actions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enlist early adopters of ELOs, HIPs, and curriculum scaffolding as exemplars</td>
<td>Jeff, Tod</td>
<td>Provides experiential evidence for ELOs and HIPs; provides models</td>
<td>Fall 2013</td>
</tr>
<tr>
<td>Ask departments to compare and contrast their program goals to the ELOs they claim to value and teach, using the survey data.</td>
<td></td>
<td>CLAS departments have indicated buy-in for ELOs. The goal is to create shared language for students to understand learning outcomes across the College (and eventually the University); create language to describe what ELOs mean for each unit; supports intentional path toward program goals</td>
<td>Fall 2013</td>
</tr>
<tr>
<td>Ask departments to consider revising program learning goals as a result of their compare and contrast exercise.</td>
<td>LET; departments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ask departments to map curricula to their revised learning outcomes, considering the incorporation of High Impact Practices.</td>
<td></td>
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</tr>
<tr>
<td>Ask departments to scaffold curricula within majors to reflect their mapping and learning outcomes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ask departments to consider revision of existing courses to align with new outcomes and scaffolding.</td>
<td>Units</td>
<td></td>
<td>Spring-Fall 2014</td>
</tr>
<tr>
<td><strong>Consultations</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Get statement of support from Provost</td>
<td></td>
<td>Helps sustain ELOs and HIPs</td>
<td>ASAP</td>
</tr>
<tr>
<td>Increase input and connections with student affairs and other admin units</td>
<td>LET, advising, Student Services</td>
<td>Collaborate with key constituencies outside of academic units to shape integrated and coherent educational experience</td>
<td>Fall 2013</td>
</tr>
<tr>
<td>Create focus groups of students</td>
<td>LET</td>
<td>Make learning outcomes accessible and</td>
<td>ASAP</td>
</tr>
</tbody>
</table>
### Evidence of Success (How will we know we’re making progress?)

**CLAS Department Actions:**
1. Request statements from Department Chairs on the evaluation they performed.
2. Compare Department program goals/LOs before and after alignment of program goals with ELOs.
3. Request curriculum maps from Departments committed to producing them and look for evidence of scaffolding.
4. Compare syllabi before and after revision for alignment with program goals and ELOs.

**Appendix: Results of the Team’s Quadrant Analysis**

<table>
<thead>
<tr>
<th>Appendix H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence of Success (How will we know we’re making progress?)</td>
</tr>
</tbody>
</table>

#### Appendix: Results of the Team’s Quadrant Analysis
Quadrants: 1. **not** a pain in the arse (PITA) and high impact (the ones to focus efforts on first); 2. not PITA but low impact; 3. PITA but would be high-impact; 4. PITA and low impact (the ones omitted).

<table>
<thead>
<tr>
<th>Not PITA</th>
<th>HIGH IMPACT</th>
<th>Market LOs by admissions as who we are and what we offer: write paragraphs, talking points, etc. for different constituencies to spread our message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not PITA</td>
<td>HIGH IMPACT</td>
<td>Distribute data back to departments; Align program goals with ELOs per survey data</td>
</tr>
<tr>
<td>Not PITA</td>
<td>HIGH IMPACT</td>
<td>Develop shared language/vocabulary around ELOs across different stakeholders, curriculum, etc</td>
</tr>
<tr>
<td>Not PITA</td>
<td>HIGH IMPACT</td>
<td>Bring student affairs and other admin units into conversation</td>
</tr>
<tr>
<td>Not PITA</td>
<td>MEDIUM</td>
<td>Assess available data to demonstrate efficacy of existing HIPs then package for consumption -- then depts adopt at least one HIP based on data</td>
</tr>
<tr>
<td>Not PITA</td>
<td>MEDIUM</td>
<td>Figure out what data exists and what we need</td>
</tr>
<tr>
<td>Not PITA</td>
<td>MEDIUM</td>
<td>Bring academic advisor representation to the CCOC</td>
</tr>
<tr>
<td>Not PITA</td>
<td>LOW</td>
<td>Identify people who are already doing ELO work to advocate for curricular reform by showing what works: Identify Mavens</td>
</tr>
<tr>
<td>Not PITA</td>
<td>LOW</td>
<td>Create teaching certificate program</td>
</tr>
<tr>
<td>Not PITA</td>
<td>LOW</td>
<td>Include students in conversations and committees about curricular change</td>
</tr>
<tr>
<td>Not PITA</td>
<td>LOW</td>
<td>Evaluate alignment between core LOs and ELOs, mapping the former to the latter (</td>
</tr>
<tr>
<td>PITA</td>
<td>HIGH IMPACT</td>
<td>Make professional development an official criterion in promotion and RTP, and rewards systems</td>
</tr>
<tr>
<td>PITA</td>
<td>HIGH IMPACT</td>
<td>Hire excellent Director for the Center of Faculty Development</td>
</tr>
<tr>
<td>PITA</td>
<td>HIGH IMPACT</td>
<td>Persuade upper administration that we need resources</td>
</tr>
<tr>
<td>PITA</td>
<td>HIGH IMPACT</td>
<td>Incorporate co-curricular activities into Los</td>
</tr>
<tr>
<td>PITA</td>
<td>HIGH IMPACT</td>
<td>Scaffold curriculum within majors</td>
</tr>
<tr>
<td>PITA</td>
<td>HIGH IMPACT</td>
<td>CU Denver will establish a body composed of representative faculty that provide oversight for CU Denver courses and curricula</td>
</tr>
<tr>
<td>PITA</td>
<td>HIGH IMPACT</td>
<td>Revise FCQs to make them meaningful</td>
</tr>
<tr>
<td>PITA</td>
<td>HIGH IMPACT</td>
<td>Revise core to shift from a distribution model to a competencies and skills model</td>
</tr>
<tr>
<td>PITA</td>
<td>HIGH IMPACT</td>
<td>Create small learning communities through linked courses and measure efficacy</td>
</tr>
<tr>
<td>Unknown</td>
<td>HIGH IMPACT</td>
<td>Revise student portal to allow students to see course tags (for courses of potentially similar interest across disciplines) and to see syllabi and faculty profiles</td>
</tr>
</tbody>
</table>
ELOs vs. CU Denver Core-Area Learning Outcomes vs. CLAS Program Learning Outcomes

Number of matches between language in the ELOs and language in the CU-Denver Core learning outcome statements and the CLAS majors’ learning outcome statements:

<table>
<thead>
<tr>
<th>ESSENTIAL LEARNING OUTCOMES (ELO)</th>
<th>Frequency with which ELO appeared in CU-Denver Core LOs</th>
<th>Frequency with which ELO appeared in CU-Denver Major Discipline LOs</th>
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</thead>
<tbody>
<tr>
<td>Inquiry and Analysis</td>
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<td>12</td>
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<tr>
<td>Critical Thinking</td>
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<tr>
<td>Creative Thinking</td>
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<td>1</td>
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<tr>
<td>Written Communication</td>
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<tr>
<td>Oral Communication</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Reading</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Quantitative Literacy</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Information Literacy</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Teamwork</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Civic Knowledge and Engagement</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>Intercultural Knowledge and Competence</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Ethical Reasoning</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Foundations and Skills for Lifelong Learning</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Integrative and Applied learning</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>
Appendix I continued: Frequency Distribution of Equivalencies Between LEAP ELOs and CU-Denver Core and CLAS Disciplinary Major Learning Outcomes

Frequency Distribution of Equivalencies between LEAP ELOs and CU-Denver Core and CLAS Disciplinary Major Learning Outcomes: Stacked Graph by Percentage Distribution
Appendix J

Alignment of the ELOs with the CLAS Strategic Plan 2008-2020

The mission of the AAC&U’s LEAP program in general is consistent with, and the Essential Learning Outcomes (ELOs) use the same language as, the CLAS mission and vision:

**Mission:** To foster academic excellence, to create and impart knowledge critical to a modern society and a global economy, and to ensure the acquisition of skills essential for professional careers and graduate study.

**Vision:** By 2020, CLAS will have enacted a new paradigm for a liberal arts education that retains the proven values of a broad education while imparting career-oriented skills throughout the curriculum. (2)

The ELOs speak directly to the College’s definition of a liberal education:

We define liberal education to include four major components:

1. Central elements of knowledge, including:
   - knowledge of the diversity and significant dimensions of human culture and a specific understanding of United States’ culture(s);
   - aesthetic awareness and appreciation of cultural contributions to the human experience by the social sciences and humanities;
   - an understanding of methods of inquiry and development of knowledge that form the bases of progress in the natural and physical sciences
2. Essential skills for analysis, writing, computation, communication, and decision-making;
3. Developing a constructive orientation toward society through enhancing students’ capacity to make informed and responsible choices based on democratic principles of due process, civil liberties, and the balance between individualism and the common good;
4. The ability to apply knowledge of the arts and sciences to society’s specific needs.

CLAS works to instill in students an understanding of these components through required skills and core courses and through knowledge and skills required by each major program. (1)

The CLAS “Strategic Priority #2” focuses on the delivery of “an outstanding and innovative educational experience” and contains goals and objectives aligned with those of the taskforce and represented in the premises behind and the language of the ELOs:

**Goal 2.1** Create unique educational experiences that define CLAS as a first-choice college for students and faculty

**Objective 2.1.1** Integrate problem-focused learning into the undergraduate curriculum

**Objective 2.1.2** Increase undergraduate student research and creative activity, including experiential learning opportunities for students

**Objective 2.1.3** Expand teaching and learning innovations and conduct research to determine the effectiveness of alternative pedagogies and delivery modes in urban, rural, and international education sites

**Objective 2.1.4** Build capacity and increase delivery of educational programs aimed at life-long learners

**Objective 2.1.5** Expand access to our academic programs through the use of non-traditional delivery systems

**Objective 2.1.6** Develop and pilot innovative “extra year” programs offering enhanced academic skills and additional credentials
Objective 2.1.7 Grow and diversify international college sites and global institutional partnerships to deliver multi-modal undergraduate, graduate, professional, and continuing education in strategic sites around the world
Objective 2.1.8 Provide support for CLAS Signature Areas whose missions correspond with this goal
Objective 2.1.9 Improve interaction between CLAS and departmental advisors
Objective 2.2.10 Strengthen our relationships with student academic support centers, offices, and service outlets

Goal 2.4 Promote the scholarship of teaching and learning and integrate the latest research data on teaching and learning throughout the curricula of CLAS
Objective 2.4.1 Develop a system to identify, nurture, disseminate, and reward learning innovations and good educational practices across the institution
Objective 2.4.2 Expand evidence-based systems to measure and assess educational quality and student success, and use that information to improve continuously the performance of faculty, students, residents, and fellows
Objective 2.4.3 Provide faculty development and research resources to enhance faculty scholarship of teaching and learning
Objective 2.4.4 Fund innovative pilot teaching/learning programs
Objective 2.4.5 Reward exemplary teaching
Objective 2.4.6 Create opportunities for discovery or creative work/study experience for students and ensure that they understand links between teaching and research
Objective 2.4.7 Provide support for CLAS Signature Areas whose missions correspond with this goal
Objective 2.4.8 Develop and strengthen partnerships with UCD’s P-20 Signature Area (3-4)
**Integrative Biology**

The table below summarizes the responses of the faculty in Anthropology to the two questions posed to them by the Learning Enhancement Taskforce late in Spring 2013.

**Question 1:**

*How valuable to their future success and contribution to society do you think it is for undergraduate students to learn each of these skills and dispositions?* Four-point Likert scale: 4 = essential; 3 = very valuable; 2 = somewhat valuable; 1 = minimally valuable; I don’t know.

**Question 2:**

*How could the courses offered by your department or program contribute to undergraduate student learning of these skills and dispositions?* Four-point Likert scale: 4 = crucial contribution; 3 = strong contribution; 2 = moderate contribution; 1 = small or no contribution; I don’t know.

<table>
<thead>
<tr>
<th>INTEGRATIVE BIOLOGY</th>
<th>Inquiry and analysis</th>
<th>Critical thinking</th>
<th>Creative thinking</th>
<th>Written communication</th>
<th>Oral communication</th>
<th>Reading</th>
<th>Quantitative literacy</th>
<th>Information literacy</th>
<th>Teamwork</th>
<th>Problem solving</th>
<th>Civic Knowledge</th>
<th>Interpersonal knowledge</th>
<th>Ethical reasoning</th>
<th>Lifelong learning</th>
<th>Integrative and applied learning</th>
<th>MEDIAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 Learning you value</td>
<td>3.6</td>
<td>3.9</td>
<td>3.5</td>
<td>3.6</td>
<td>3.7</td>
<td>3.8</td>
<td>3.5</td>
<td>3.3</td>
<td>3.1</td>
<td>3.6</td>
<td>3.1</td>
<td>3.0</td>
<td>3.6</td>
<td>3.3</td>
<td>3.3</td>
<td>3.5</td>
</tr>
<tr>
<td>Q2 Learning to which you contribute</td>
<td>3.6</td>
<td>3.8</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.4</td>
<td>3.3</td>
<td>2.9</td>
<td>3.6</td>
<td>2.1</td>
<td>1.9</td>
<td>2.6</td>
<td>3.2</td>
<td>3.5</td>
<td>3.0</td>
</tr>
<tr>
<td>Q2-Q1</td>
<td>0.0</td>
<td>-0.1</td>
<td>-0.5</td>
<td>-0.6</td>
<td>-0.7</td>
<td>-0.8</td>
<td>-0.1</td>
<td>0.0</td>
<td>-0.2</td>
<td>0.0</td>
<td>-1.0</td>
<td>-1.1</td>
<td>-1.0</td>
<td>-0.1</td>
<td>0.2</td>
<td>-0.5</td>
</tr>
<tr>
<td>Q2+Q1</td>
<td>7.2</td>
<td>7.7</td>
<td>6.5</td>
<td>6.6</td>
<td>6.7</td>
<td>6.8</td>
<td>6.9</td>
<td>6.6</td>
<td>6.0</td>
<td>7.2</td>
<td>5.2</td>
<td>4.9</td>
<td>6.2</td>
<td>6.5</td>
<td>6.8</td>
<td>6.5</td>
</tr>
</tbody>
</table>
Integrative Biology

Listed below are the Essential Learning Outcomes that you most value for undergraduate students and to which you contribute strongly in terms of student learning.

- Critical thinking
- Problem solving
- Inquiry and analysis
- Quantitative literacy

Below is a list of your current Program Learning Goals:

1. Students will be able to understand the central dogma and its importance to biology including evolution.
   a) Students will be able to discuss the central dogma including transcription and translation.
   b) Students will be able to describe basic mechanisms of gene regulation.
   c) Students will be able to show an understanding of the importance of the central dogma to biology.

2. Students will be able to understand the relationship between structure and function at all levels of organization from the cell to the organism. Students will be able to recognize and interpret differences in structure and function among major groups of organisms within the context of their evolution.
   a) Students will be able to relate the importance of changes in structure or function of a cell, tissue, organ, or organisms to the survival of an organism.
   b) Students will be able to compare and contrast the similarities and differences in structure and function among species and understand biological diversity.
   c) Students will understand the role natural selection and evolution have played in the diversity of organisms found in all ecosystems.
Are there any Essential Learning Outcomes from the top list that are not reflected in your Program Learning Goals? If so, are you willing to adjust your list to reflect that which your Department most values and teaches so that what you implicitly value becomes explicit in your Department Goals for student learning?

Listed below are the Essential Learning Outcomes that you indicated you contribute to significantly less than you value.

- Civic knowledge
- Oral communication
- Ethical reasoning
- Reading
- Written communication

Some of these may simply not be appropriate given the content of the discipline; however, are there any of these areas that may, upon reflection of the faculty, be appropriate for integration into your program learning outcomes?
Appendix L

LET Action Plan for CLAS Departments for Fall 2013 and Spring 2014

What the CLAS Learning Enhancement Taskforce is asking CLAS Departments to Do:

For Fall 2013

1. **Have an informed conversation with your faculty**
   a. Distribute reading materials in advance: department-specific data report from the questionnaire, Essential Learning Outcome (ELO) definitions, department-specific subset of VALUE Rubrics (or all VALUE Rubrics)
   b. Hold the conversation, analyzing and interpreting the similarities and differences between current undergraduate program(s) learning outcomes and the ELOs that your faculty have said they both highly value and believe they teach
   c. Identity among those ELOs which are
      i. Basically already there in your current program learning outcomes
      ii. Clearly implicit but not yet explicit in your current outcomes
      iii. Neither explicit or implicit but appropriate to your discipline and compatible with what you teach or believe you should teach

2. **If willing, revise your current learning outcomes**
   a. For c.i. and c.ii. above, simply revise existing outcome statement, perhaps only inserting the ELO name
   b. For c.iii. above, write one or more new outcome statements to add to your list
   c. This could be done in the first meeting, in a second meeting, by yourself or by a designee, or by a subcommittee in a couple of hours

3. **Internalize and make explicit the revised program learning outcomes**
   a. Distribute the revised program learning outcomes to all faculty
   b. Request that faculty revise (or write) their spring 2013 undergraduate course learning outcomes to incorporate one or more of the program learning outcomes
   c. Emphasize that
      i. All courses will have different content-specific learning outcomes
      ii. Not all courses need to teach all of the program learning outcomes
      iii. But there should be some continuities between course learning outcomes and program learning outcomes

For Spring 2014

4. **Make a curriculum map**
   a. You—your faculty as a whole, a committee, or the chair or lead faculty member—review your departmental course syllabi, paying attention to the course learning outcomes that hopefully appear there, working from your electronic compilation of syllabi for spring 2014 (and, if you wish, fall 2013, etc.). The purpose is to build an overarching understanding of which courses cover which of the program learning outcomes.
b. The LET will provide you with a blank Excel spreadsheet with your revised program learning outcomes (gotten from you) across the top of the columns and the courses that you offer regularly running down the left side of the rows (all courses your department has offered within the past three years, which we will compile).

c. Fill in this spreadsheet, working from the syllabi. Mark for each course which of the program learning outcomes it addresses and at which level. Decide in advance which level descriptors you will use, whether Basic/Intermediate/Advanced, Introduced/Practiced/Demonstrated, or something like that you devise. Each cell in your spreadsheet will contain a single-letter abbreviation for one of these categories or be empty. Examples will be provided by the LET. [LET is recommending using Introductory (I), Developing (D), and Mastery (M) relative to the program’s stated learning goals.]

5. **Scaffold your curriculum**
   
a. Working from the results of step 4. above, chart potential learning pathways upward through your course offerings for each of the program learning outcomes. Your goal is to have a required course that delivers the learning of each outcome at each of the three levels.

b. Identify gaps in your curriculum, for instance where there is no course that currently delivers the learning of a program outcome at one of the three levels. Also consider redundancies, which are not necessarily undesirable.

c. Compare/contrast your current curriculum structure—your advising sheets—to the results of a. and b.

d. Consider course redesign and curriculum redesign options to create clearly delineated cumulative pathways of learning within your program.

6. **Report the results**
   
Summarize the above actions, any reforms that you have made or decided to undertake as a result, and your evaluation of this process and experience. If you choose, this could serve as your 2013-2014 departmental assessment report to the CU Denver Office of Assessment.
Information on completing the Courses and Goals Sheet

What you are being asked to do:
You’re being asked to evaluate EACH course in your program and determine whether it contributes to your program goals and, if so, to what extent. Does the course introduce principles and skills (level I), does it develop skills and principles introduced earlier in the curriculum (level D), or does it hone and anticipate mastery of skills and principles from earlier parts of the curriculum (level M)?

Why it matters:
1. As a student moves through a curriculum, their learning should progress along an educational continuum. Progress in that continuum requires that skills, content knowledge, and dispositions be developed in a structured way. This "scaffolding" allows a student to move from a "novice" to being competent in a content domain, in a structured manner.
2. Scaffolding identifies clear paths that students can take through a curriculum and prevents their arrival at the 'end-point' merely 'hoping' that they've mastered those skills, content areas, and dispositions that the program intends them to.

What you will get out of it:
1. It should be much clearer both to you and your students whether students in your program are able to move through your curriculum in a way which allows them to progress from being a relative "novice" in the domain of study to being competent in the domain (relative to your goals) BECAUSE OF the sequences of courses they take
2. Courses that fill gaps in the progression from "novice" to competence can be considered for addition to the program so there is a clear progression for the student. Courses that do not contribute to the program goals can be evaluated for removal or redesign so they better fit with the program goals of the department.

What do do with the Courses and Goals Sheet:
Into each cell place one of the letters I, D, or M. These letters represent the contribution that the course makes to moving a student from "novice" to competence in the context of the learning goals you articulate. The letters are more fully defined below. If you wish to articulate your own definitions of the levels, please change the definitions below and highlight them so it is clear you have done so. Only one letter can be placed in a cell and there can be no overlap between the definitions if you adjust them.

CHAIRS: Strategies for completing the work:
1. As the chair you may wish to evaluate the level for the course and use that as an initial starting point for discussions with your colleagues about the actual learning that is expected fo each course relative to the program goals.
2. You may wish to call a meeting with your faculty or curriculum committee and talk through how each of the courses in the spreadsheet contributes to a student’s progress through the curriculum as they move from novice to competence.
3. Upload this document into Google Drive as a Spreadsheet, share the link with edit rights to your faculty, ask INDIVIDUALS to complete the scaffolding AFTER you have discussed as a group the levels I, D, and M (see below).
4. Distribute the spreadsheet to INDIVIDUALS and ask them to complete it for their courses AFTER you have discussed as a group the levels I, D, and M (see below). Collect the spreadsheets and aggregate the information into one MASTER sheet.
5. When finished, you should be able to see whether you have a) a curriculum that progresses a student from being a novice in respect to each of your program goals to being an expert in those goals; b) if there are program goals that are not being met by your existing courses (orphan goals); and, c) if there are any gaps in the students educational progress (e.g. are there level D and M, but no D under a goal?). Subsequently, you may wish to consider adjustments to the curriculum in your program based on your conclusions.

What are the definitions of I, D, and M?
1. Students are introduced to principles, skills, and/or dispositions of experts in the discipline.
2. Students comprehension of principles is developed, skills are practiced, and dispositions become more advanced.
3. Student is expected to be able to demonstrate mastery of content, integrate seemingly disparate principles, demonstrate proficiency at skills, and/or have dispositions similar to those of an expert. Bear in mind, "mastery" is relative to the standard articulated in your goal and it is not intended to be synonymous with "expert".
<p>| | | |</p>
<table>
<thead>
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<tbody>
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In this cell type or paste the title of one of your program goals. Repeat the process in columns D, E, etc., until you have added all your program goals. Delete the colored boxes and arrows before starting.

This row with your program goals is "frozen" and won't move as you scroll vertically.

These are the courses that your department has offered in the past three years. You may want to delete courses that do not count towards the major. You may add courses not listed here. If you regularly offer courses with other prefixes (e.g., WGST, SJUS, INTS, etc.) and count them toward your major, then you may want to add them at the bottom of this column. This column is "frozen" and won't move when you scroll horizontally.

In these cells indicate whether the course meets the program goal at the top of the column at level I, level D, or level M. See the instructions tab for more information about these levels.
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<th>D</th>
<th>E</th>
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<td>Clearly articulate in writing a perspective using discipline-specific content and sound reasoning.</td>
<td>Interpret data to reach sound and valid conclusions.</td>
<td>Find and use reliable primary and secondary sources to craft arguments</td>
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Here, the fundamentals of the goal are not introduced in the curriculum. A curricular change that introduces the fundamentals of the goal into an earlier course (preferably a core course) may be appropriate. If the fundamentals of the goal are from a Core Curriculum course, do the faculty teaching the courses deal with levels D and M, to what extent? The goal is to not achieve perfection when looking at the scaffolding of a curriculum, but to improve upon the current model. Any change that moves more students through a curriculum in an intentional manner, from novice to competence, means that more students leave a program having achieved the learning that is desired by that program.

Here, the fundamentals of the goal are introduced, they are developed and practiced (!), and there are opportunities to demonstrate "mastery" of the goal in several classes. Of course, maybe not all students pass through these classes, so perhaps consideration is given to how best to drive students through the curriculum such that all students must hit all levels.

Here, students are expected to demonstrate mastery of the goal; however, there has been neither an introduction to the skills required to achieve mastery, nor an opportunity to develop and practice the skills. There is a greater likelihood that instruction in these classes spends time addressing levels I and D rather than allowing students to demonstrate mastery.
Appendix N

INTEGRATIVE LEARNING

Definition
Integrative learning is an understanding and a disposition that a student builds across the curriculum and co-curriculum, from making simple connections among ideas and experiences to synthesizing and transferring learning to new, complex situations within and beyond the campus.

Framing Language
Fostering students’ abilities to integrate learning—across courses, over time, and between campus and community life—is one of the most important goals and challenges for higher education. Initially, students connect previous learning to new classroom learning. Later, significant knowledge within individual disciplines serves as the foundation, but integrative learning goes beyond academic boundaries. Indeed, integrative experiences often occur as learners address real-world problems, unscripted and sufficiently broad, to require multiple areas of knowledge and multiple modes of inquiry, offering multiple solutions and benefiting from multiple perspectives. Integrative learning also involves internal changes in the learner. These internal changes, which indicate growth as a confident, lifelong learner, include the ability to adapt one's intellectual skills, to contribute in a wide variety of situations, and to understand and develop individual purpose, values and ethics. Developing students’ capacities for integrative learning is central to personal success, social responsibility, and civic engagement in today’s global society. Students face a rapidly changing and increasingly connected world where integrative learning becomes not just a benefit...but a necessity.

Because integrative learning is about making connections, this learning may not be as evident in traditional academic artifacts such as research papers and academic projects unless the student, for example, is prompted to draw implications for practice. These connections often surface, however, in reflective work, self-assessment, or creative endeavors of all kinds.

Integrative assignments foster learning between courses or by connecting courses to experientially-based work. Work samples or collections of work that include such artifacts give evidence of integrative learning. Faculty are encouraged to look for evidence that the student connects the learning gained in classroom study to learning gained in real life situations that are related to other learning experiences, extra-curricular activities, or work. Through integrative learning, students pull together their entire experience inside and outside of the formal classroom; thus, artificial barriers between formal study and informal or tacit learning become permeable. Integrative learning, whatever the context or source, builds upon connecting both theory and practice toward a deepened understanding. . . . 19

Examples of Integrative Educational Practices at Multiple Levels (from the Learning Enhancement Taskforce)

1. Student:
   - Takes courses in sequence
   - Takes related courses in different disciplines simultaneously
   - Builds connections or applications from courses to/from co-curricular activities
   - Builds connections or applications from courses to/from experiential or service-learning

2. Individual faculty:
- Teaches a progressive sequence of courses
- Teaches or applies interdisciplinary content or method
- Teaches non-discipline-specific transferable skills (e.g., Essential Learning Outcomes)
- Co-teaches with faculty from another specialty or discipline
- Integrates active research into teaching

3. Department/program/office:
- Maps program learning outcomes to higher-order learning outcomes (e.g., the ELOs)
- Scaffolds curriculum/activities to create cumulative learning pathways—students get all outcomes in a progressive sequence at introductory, intermediate, and advanced levels
- Enforces the prerequisites
- Creates interdisciplinary and team-taught courses
- Incorporates High-Impact Practices, offering first-year, experiential, service-learning, internship, co-curriculum-linked, and/or capstone courses

4. College/School/Division:
- Provides support for departments working toward integration
- Adopts highest-order learning outcomes and makes those publically explicit, part of college identity
- Supports directed, individually-structured majors
- Facilitates the creation of “big idea” multidisciplinary course clusters and arranges parallel course scheduling: Learning Communities
- Creates interdisciplinary programs, collaborating with other schools/colleges
- Develops across-the-curriculum offerings that fulfill Core, e.g., writing in the disciplines
- Collaborates with Student Affairs to build curricular-to-co-curricular links

5. Campus/Upper Administration/Infrastructure:
- Endorses shared, campus-wide highest-order learning outcomes for all undergraduates
- Supports revision of the FCQs for more meaningful measurement of student engagement and learning, in general and in particular of those highest-order learning outcomes
- Fully funds a faculty development center to support these efforts and leads campus-wide initiatives for faculty growth in the teaching required for integrative practices
- Supports the development and implementation of integrative practices such as Learning Communities, Experiential Learning, across-the-curriculum programs, etc.
- Supports collaborations between Academic Affairs and Student Affairs to develop these and other integrative programs
- Supports course “tagging” in the Catalog/Portal such that students see links between courses from multiple disciplines and so register in a more integrated schedule of courses
147 out of 395 (37.2%) respondents provided e-mail address to obtain survey results. 48 out of 395 (12.2%) respondents attended the UE Symposium in October.

Participants were asked to identify up to 5 responses for developing a prioritized action plan. Responses are given as percentage selecting a specific survey response.

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<th>Staff</th>
<th>Faculty</th>
<th>Admin</th>
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Appendix O continued:

University of Colorado Denver
Ninth Annual Undergraduate Experiences Symposium
2013 UE Symposium Evaluation

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<th>Symposium Evaluation Topic (0-5 rating scale, 91 evaluations)</th>
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<th>Average</th>
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<td>Curtis Hotel – breakfast and lunch</td>
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Evaluation Comments – Rating Section

Ran out of breakfast plates
Keynote Speaker - Would have liked keynote PowerPoint in packet
mini-Symposium - What will the mini-Symposium include?
Panel Presentation – was very brief
Two breakfast buffet [lines] to cut down on the lines
Keynote Speaker – too many words on PP. Table Discussions – surprisingly excellent; was skeptical of all unit people together. Curtis Hotel – love it!
Curtis Food – more gluten-free food, otherwise great
Panel Presentation – good update of Task Force’s efforts
Panel Presentation – mostly forgettable, Mitch had the hook and delivery
Keynote Speaker – concerned about his deficit-oriented perspective at times about students coming to universities. We can’t think this way about students → we must embrace that they come with lots of varied expertise and life experiences we too often ignore in higher education
mini-Symposium – great idea
Panel Presentation – Mitch’s presentation was great – as a commentary
Table Discussions – love the mix of people at the table – primarily my program with a mix of student-focused staff from across the university

<table>
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<tr>
<th>10th Annual UE Symposium Format Option – 91 evaluation forms</th>
<th>Number</th>
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</thead>
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<tr>
<td>Focus discussion around external speaker with national prominence</td>
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</tr>
<tr>
<td>Focus on internal discussion without external speaker</td>
<td>23</td>
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<tr>
<td>Focus on college/school-level discussions rather than campus-wide</td>
<td>9</td>
</tr>
<tr>
<td>Rely on Spring semester mini-Symposium as follow-up, independent of Fall format</td>
<td>19</td>
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<tr>
<td>In lieu of formal Symposium, move discussions to existing committees (UWG)</td>
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<tr>
<td>Cancel, for a period of time, UE Symposia</td>
<td>0</td>
</tr>
<tr>
<td>Other, please comment</td>
<td>5</td>
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</tbody>
</table>

Evaluation Comments - UE Symposium Format

Continue developing institution-wide planning and implementation
Or build on what we did today
Employers – employer panel. Policy makers – state law makers, Colorado Board of Education
Combine the first 5 options
Integrate options 1 and 3
Present, plan, assess actual activities that are going on that relate to the goals of the Symposium. Give us tools to implement change.
Perhaps piggy back on advising session for the afternoon to standardize the advising [?] so advisors are offering the same message across disciplines
This year’s speaker sparked discussion, excitement, and made the experience more meaningful.
I won’t check this [format] options’ off because I would say “it depends.” This was a great mix of external speaker as a catalyst. More focused discussions working across schools/colleges would be a great next step regarding implementation of ELOs but also changing campus culture for the faculty and our teaching philosophies
I think the format should be driven by the topic and intended outcomes
How to integrate the culture of integrated learning
The current results and incorporate into a strategic plan for colleges. Continue present focus into next year.

Additional Comments – Fall 2013 UE Symposium
Keep and expand the Learning Enhancement Task Force to institutional level.
Move forward with clear expectations from top that CU-D will become an integrated learning institution and begin doing/designing institutional research to demonstrate effectiveness (student outcomes)
Wonderful group of people – well organized. My 1st time and I was very impressed.
Great discussions
Possibly have tables specialize in individual problems UCD faces, rather than have every table address the same questions
This was an excellent experience! Thank you to everyone who helped plan and put this event on!
Make it all day and have people switch tables halfway through
Great experience. Interesting and contemporary discussions.
Appreciate the good [?] Love the food.
Very well organized. John kept things on-task. Timing seemed appropriate
Great table compositions
Good food for thought all around
Most productive and relevant UES I’ve been to so far
As a current student, I truly appreciated the opportunity to attend the Symposium and to witness this brainstorming session from my perspective. It became even more evident just how dedicated EVERYONE is to the success of students and the need to continuously improve. Thanks you!
College of arch poised to become model of ELO and catalyze initiative
How do we continue this conversation throughout the year? How do we continue to integrate academic and student affairs? How can graduate programs/schools do this? How do we implement these plans?
It was very interesting
Keep getting better every year because I have been able to network with more staff and faculty who are interested in bringing up student learning
Should include some employer [?]. Like the idea of doing a capstone in another area. More table discussions.
The food and discussions were great. I very much enjoyed being able to meet and discuss issues across campus departments. Each group brings and knows success and challenges
Great way to keep conversation alive about moving university forward. Great way to get to know other colleagues that aren’t part of your regular work.
Good topic
Thank you for the high quality gel pen. It would be very effective to have faculty at the table when we are talking about unit (college) level action items. Can we market to them more? If that makes the event too big; perhaps there could be multiple symposia days split by college/unit.
Wonderful!
Great networking opportunity. Would dismiss tables sequentially. I would prefer discussions that are more campus-centric and less college-based.

Thank you
Keynote didn’t seem to motivate or inspire – more informative but was hoping for more passion-inspiration
The presenter had some interesting info, but was not as inspirational as he was presented. However, I did like his closing remarks
Could not see the slides. The slides need to be in packet. The problem w/ assigned seats is that some people have visual disabilities and need closer to the speaker/screen
Exciting and inspiring to share with diverse group made up of like-minded, dedicated professionals
Give us more than just the ‘top 3’ recommendations from last year, I see a lot of repeated suggestions from last year.
This event is very important and great tradition. Please keep it going!
UE Symposium is always reinvigorating and reminds me of the important work we do for students. Thank you!
Excellent discussions, made important connections
Bring these ideas and suggestions to those who can make change happen!
The Symposium has provided the best glimmer of hope for me that this institution can actually change who we have been and what perception of what we currently are. We can actually move to our strengths or develop strengths instead of assuming we are just like a flagship but acting like a glorified CC
Excellent Symposium.
Great Job! Seamless and wonderfully organized.
We need an opportunity to have sustained focus on moving this forward in our units and the university. I think this idea has so much potential for transformation of our institution if we can get systemic traction!
There are so many things that need to change in the way the academy operates to make this happen!
The quality of moderation provided by the table leader was a little less productive than it could have been, but it was not without worth.
Can we have representatives from different schools and colleges at each table? Example, CLAS rep and Business rep at the same table.
Each fall, it would be interesting to hear about any changes (hopefully positive) that have occurred in the year.
Communication is an ongoing challenge
I think it would be beneficial to have more students present for small group discussions.
Well done.
Better logistics for lunch lines. Great to have students! Table discussions tended to go off topic → may not have ended up where we should have.
Our table rocked! The format of the symposium actually moves forward the intention of integrative learning. Nice
There were some obstacles in terms of table members not being open to the topic…. This is huge, this is exciting, this is NECESSARY. Thanks you. Space, funding, transparency and recognition of efforts are all a must.
Great conversations!
Enjoyed several perspectives. Can we continue the conversation? Will we see the ideas we campu up with today implemented?! Follow through is needed

Planning for 10th Annual UE Symposium Suggestions
Bring in someone from Portland State, Notre Dame, or other institution to lead a conference on how to implement ELOs in curriculum.
How to implement a plan on our campus. We often create great plans and do not implement creative funding ideas in budget-tight years.
Focus on reality of contract faculty teaching majority of course hours. Help support contract faculty buy-in to UCD initiatives, resources. Bring actual employers or policy makers (law makers)
I would love to see another panel involving CU Denver, Deans and higher administration. It’s so rare that I get to interact with them as a staff member, so it was great to see them at last year’s Symposium.
Let’s continue with this topic – so important
Keep info re: national perspective. Have demos from faculty that are successful in modeling integrated teaching.
Examples of people on campus already using successful collaboration across departments – a pilot program to use as an example
Implementing the ideas we’ve come up with and more importantly rallying support from others, especially admin
Prof Martha Nussbaum
More discussion on where we are now as a University. What has changed as a result of these symposiums. What needs to happen next, time frames, etc.
Commuter campus status of CU Denver and the fact that many students are adults with families and jobs. → How can we engage with this type of population?
Engagement of students from all backgrounds to build campus community. Include all sources of students and making them one population, instead of freshmen, transfer, int’l
Invite PSU or similar school who has implemented a process that we’d like to emulate.
How university can support these kinds of innovations – Changes to RTP, FCQs, grades, space, 45 contact hours. What can change?
Enrollment management - Sustainability
Let’s look at our own data and have a discussion about that. We did that a couple of years ago w/retention, and it was so insightful.
Learning communities
Instilling passion in undergraduate students in their study. It doesn’t have to wait for grad school to have these ideas apply to real life/work!
Disruptive innovation.
Someone from Portland State may help with implementation.
Student development theory.
Build a more cohesive community that contributes to the Undergraduate Experience
Maybe we need to have an internal conversation about resources/activities that everyone should know about.
Someone who is an expert or has done work in a cross-discipline way, who can demonstrate and speak about the types of model we discussed today. Example – someone of a small panel of people from neurosciences
Integrative learning – a follow-up. Where are we now?
What is going on at CU Denver, statistics from this campus.
Appendix P

Survey and Results from the Undergraduate Experiences Symposium Table-Leaders (1/2014)

Undergraduate Experience Symposium Follow-up Survey
So that we can better prepare for a potential April mini-UE Symposium, please respond to this short survey by Friday, Dec. 20th, 2013

* Required

Name: ____________________________

Unit
WHICH describes your representation at the Symposium?

I am a....  (select all that apply)

☐ Table leader
☐ LET member
☐ Neither of the above

What support (broadly defined) is required in your unit to keep the integrative learning conversation going and to meet broad objectives prior to the April mini-UE Symposium? * (select all that apply)

☐ John Lanning and/or Jeff Franklin attend a brainstorming meeting with you and others you select in your school/college/department/office
☐ The AD&ASG takes on the topic of how to advance integrative learning across our campus
☐ Jeff Franklin provides a presentation to your faculty to introduce them to the concepts and the conversation
☐ The Center for Faculty Development (CFD) provides you with readings/expertise/workshop on the topic of ________ (add comment at end of survey as to what topic(s))
☐ The CFD coordinates a workshop for you and your faculty on how to integrate the ELOs into your school/college undergraduate program learning outcomes, how to do a curriculum mapping, or how to scaffold curriculum for vertical integration
☐ A representative of the AAC&U provides a workshop to your college on the topic of ________ (add comment at end of survey)
☐ The UES Table Leaders become a campus-wide taskforce parallel to (or replacing) the CLAS LET
☐ This taskforce or, alternately, John Lanning, Jeff Franklin, and anyone else who's interested, draft a series of recommendations to upper administration for advancing integrative learning across the campus, drawn from the table notes from the UES
☐ You administer the two-question, CLAS questionnaire about the ELOs to your entire faculty (find form at http://bit.ly/1frVT9E)
Khushnur Dadabhoy and Peggy Lore, representing Student Affairs, either meet with you and your school/college or put on a half-day workshop on integrating curriculum and co-curriculum

Barbara Seidl, with colleague from SEHD, host a meeting to explore the relationship between the most common highest-order learning goals for undergraduate education in the field of Education and the ELOs

Your school/college partners with another institution (if you have a specific one in mind, include in "Comments" section at end of survey) to work collaboratively on how to go about integrating the ELOs into your programs

John Lanning advocates with upper administration and requests, first, verbal and moral support and, later, financial support for a campus-wide effort toward integrative learning and shared highest-order learning goals for all undergraduates across schools/colleges

Are there any OTHER actions you suggest in addition to, or instead of, the options above?

If you would like to be contacted for more detail or feedback regarding your responses, or to discuss further, please provide your e-mail address here:

Comments

Submit

Never submit passwords through Google Forms.

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<tr>
<th>Total Tally for General Category</th>
<th>General Category</th>
<th>Individual Choices</th>
<th>Individual Tally</th>
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<td>58</td>
<td>Coordinate and present a workshop/presentation</td>
<td>Jeff Franklin provides a presentation to your faculty to introduce them to the concepts and the conversation</td>
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<td>The Center for Faculty Development (CFD) provides you with readings/expertise/workshop on the topic of ______ (add comment at end of survey as to what topic(s))</td>
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<td>The CFD coordinates a workshop for you and your faculty on how to integrate the ELOs into your school/college undergraduate program learning outcomes, how to do a curriculum mapping, or how to scaffold curriculum for vertical integration</td>
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<td>A representative of the AAC&amp;U provides a workshop to your college on the topic of ______ (add comment at end of survey)</td>
<td>3</td>
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<tr>
<td>Appendix P</td>
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<td>31</td>
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<td>31</td>
<td></td>
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<td></td>
<td>You administer the two-question, CLAS questionnaire about the ELOs to your entire faculty (find form at <a href="http://bit.ly/1frVT9E">http://bit.ly/1frVT9E</a>)</td>
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<td></td>
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<td>Your school/college partners with another institution (if you have a specific one in mind, include in &quot;Comments&quot; section at end of survey) to work collaboratively on how to go about integrating the ELOs into your programs</td>
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<td>John Lanning and/or Jeff Franklin attend a brainstorming meeting with you and others you select in your school/college/department/office</td>
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<td></td>
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<td>The UES Table Leaders become a campus-wide taskforce parallel to (or replacing) the CLAS LET</td>
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Appendix Q

Follow-up Summary of the Undergraduate Experiences/Learning Enhancement Taskforce
Spring 2014 Mini-Symposium, 18 April 2014

The meeting consisted of: i) an hour pre-meeting of the Learning Enhancement Taskforce (LET), joined by many of the fall 2013 Undergraduate Experiences Symposium (UES) Table Leaders, representing the DDC schools/colleges; ii) a LET presentation to Chancellor Don Elliman followed by question-answer; and iii) a general discussion about how to advance integrative learning on our campus; brief reports from Architecture & Planning, Arts & Media, Business, Education, Engineering, Faculty Assembly, Student Life, and Student Success about integrative learning efforts within those units/offices; and a preview of the fall 2014 UES and how Undergraduate Experiences (UE) might support academic units in creating more integrative educational experiences for all undergraduates across the campus.

Selected points from the LET presentation:

- We all want undergraduates to be prepared for success, a full life, and betterment of society by graduating with an array of non-discipline-specific skills and dispositions.
- National research shows that employers want new hires to possess these same skills and dispositions, which are well summarized by the Essential Learning Outcomes (ELOs).
- The LET’s research and consultation has concluded that we can do an even better job of delivering that broad set of cross-cutting capabilities.
- A primary means of doing that is to make the often fragmented educational experiences more coherent, which starts by considering those experiences as a unifiable whole.
- This requires more intentional design of curricula and more integration within and across majors, general education, co-curriculum, and community and profession-linked learning.
- “Integrative liberal education” is the goal for undergraduate education that is sharable across all schools, colleges, and offices.
- There are two broad strategies: i) where integrative learning is implicit, as in the presumed link between Core Composition and advanced writing in the disciplines, make that integration explicit; ii) where integrative learning already is explicit, as in internships and undergraduate research, multiply those opportunities for students.
- The foundational tools for achieving the above are the AAC&U’s ELOs and the High-Impact Practices (HIPs), which can be adapted to CU Denver student learning outcomes.
- The Chancellor could advance this agenda by:
  - Championing student success, undergraduate education, the teaching-and-learning mission, and, therefore, support faculty development and rewards that are crucial to implementing and sustaining those goals.
  - Championing integrative liberal learning and, therefore, support campus-wide adoption of the ELOs and growth of HIPs.
  - Leading the cultural paradigm shift that is necessary within each academic and support unit for these efforts to advance at the level of the whole campus.
  - Making “integrative liberal learning” a primary meaning of “learning with purpose” and, therefore, incorporate the above concepts in our public image.

Selected responses from Chancellor Elliman:

- “You had me at ‘hello.’” “I am completely behind this.”
- In principle supports full-time director and increased staff for the Center for Faculty Development, reserving the right to qualify what “fully funded” means.
- Recommends follow-up by presenting to the Deans’ Council and enlisting the Dean’s to fully participate in the fall 2014 UES.
Sure that Provost Nairn “would sign on to this.”
Willing to work with John/Jeff to bring the deans into the UES discussion in October.
The teaching-learning mission is not only “equivalent” to the research-creative mission--also extremely important--but “teaching is our first mission,” given the realities of our business model and, more importantly, the University’s ethical and social responsibilities.
Overall, the Chancellor has given us a mandate: focus on student learning and student success.

Selected issues raised by attendees:

- It can be challenging for professional schools to find the appropriate balance between discipline-specific preparation and accreditation standards, on the one hand, and campus integration and shared learning outcomes on the other.
- The LET and UE should practice integration by being very inclusive and diverse.
- The new Innovator School or “nSchool” is highly compatible with integrative learning.
- Integrative curricula will pose challenges for accommodating incoming transfer students.
- UE/LET may want to coordinate with the Colorado Faculty Advisory Council (CFAC).
- RaCAS is an opportunity to create integrative learning and should be supported.
- Writing-in-the-Disciplines should be guided by national research and existing expertise on our campus.
- A crucial issue is how to include non-tenure-track faculty in these considerations.
- Issues such as increasing interdisciplinarity are less money issues than priority issues.
- A key issue: upper administration support and leadership, if these changes are to occur.
- A key issue: faculty development, incentives, and rewards, because the proposed reforms rely upon changing campus culture, and this only can occur with faculty buy-in.
- The focus is not on demoting the research/creative mission but rather on promoting the teaching/learning mission to genuinely “equivalent” status in the faculty reward system.
- Integration of co-curricular activities also is very important, and the staff in Student Life and Student Success already are prepared and committed, ready to partner with faculty.
- Need to provide an explicit answer to the too frequent student question, “Why am I being required to take this?” Students should understand the value of every course.
- Institutional Research is crucial in informing and measuring the outcomes of any reforms.
- Context-specific, problem-oriented, and inquiry-based learning are key formats for integrative learning.
- Ultimate goals: a higher quality educational experience, which will result in greater student success and will help differentiate CU Denver from competing institutions.

Next Steps:

- Request that Chancellor Elliman invite the deans to attend and fully participate in the fall 2014 UES.
- John/Jeff to work with UES keynote speakers to share results of UE/LET mini-symposium and to shape format for October 2014 UES.
- Possibly create a separate session for the deans with the speakers at the 2014 UES.
- Create a short list of specific “asks,” with budget where applicable, for the Provost and Chancellor that can be implemented on a short-term basis.
High-Impact Educational Practices: A Brief Overview

The following teaching and learning practices have been widely tested and have been shown to be beneficial for college students from many backgrounds. These practices take many different forms, depending on learner characteristics and on institutional priorities and contexts.

On many campuses, assessment of student involvement in active learning practices such as these has made it possible to assess the practices’ contribution to students’ cumulative learning. However, on almost all campuses, utilization of active learning practices is unsystematic, to the detriment of student learning. Presented below are brief descriptions of high-impact practices that educational research suggests increase rates of student retention and student engagement. The rest of this publication will explore in more detail why these types of practices are effective, which students have access to them, and, finally, what effect they might have on different cohorts of students.

First-Year Seminars and Experiences
Many schools now build into the curriculum first-year seminars or other programs that bring small groups of students together with faculty or staff on a regular basis. The highest-quality first-year experiences place a strong emphasis on critical inquiry, frequent writing, information literacy, collaborative learning, and other skills that develop students’ intellectual and practical competencies. First-year seminars can also involve students with cutting-edge questions in scholarship and with faculty members’ own research.

Common Intellectual Experiences
The older idea of a “core” curriculum has evolved into a variety of modern forms, such as a set of required common courses or a vertically organized general education program that includes advanced integrative studies and/or required participation in a learning community. These programs often combine broad themes—e.g., technology and society, global interdependence—with a variety of curricular and cocurricular options for students.

Learning Communities
The key goals for learning communities are to encourage integration of learning across courses and to involve students with “big questions” that matter beyond the classroom. Students take two or more linked courses as a group and work closely with one another and with their professors. Many learning communities explore a common topic and/or common readings through the lenses of different disciplines. Some deliberately link “liberal arts” and “professional courses”; others feature service learning.

Writing-Intensive Courses
These courses emphasize writing at all levels of instruction and across the curriculum, including final-year projects. Students are encouraged to produce and revise various forms of writing for different audiences in different disciplines. The effectiveness of this repeated practice “across the curriculum” has led to parallel efforts in such areas as quantitative reasoning, oral communication, information literacy, and, on some campuses, ethical inquiry.
Collaborative Assignments and Projects
Collaborative learning combines two key goals: learning to work and solve problems in the company of others, and sharpening one’s own understanding by listening seriously to the insights of others, especially those with different backgrounds and life experiences. Approaches range from study groups within a course, to team-based assignments and writing, to cooperative projects and research.

Undergraduate Research
Many colleges and universities are now providing research experiences for students in all disciplines. Undergraduate research, however, has been most prominently used in science disciplines. With strong support from the National Science Foundation and the research community, scientists are reshaping their courses to connect key concepts and questions with students’ early and active involvement in systematic investigation and research. The goal is to involve students with actively contested questions, empirical observation, cutting-edge technologies, and the sense of excitement that comes from working to answer important questions.

Diversity/Global Learning
Many colleges and universities now emphasize courses and programs that help students explore cultures, life experiences, and worldviews different from their own. These studies—which may address U.S. diversity, world cultures, or both—often explore “difficult differences” such as racial, ethnic, and gender inequality, or continuing struggles around the globe for human rights, freedom, and power. Frequently, intercultural studies are augmented by experiential learning in the community and/or by study abroad.

Service Learning, Community-Based Learning
In these programs, field-based “experiential learning” with community partners is an instructional strategy—and often a required part of the course. The idea is to give students direct experience with issues they are studying in the curriculum and with ongoing efforts to analyze and solve problems in the community. A key element in these programs is the opportunity students have to both apply what they are learning in real-world settings and reflect in a classroom setting on their service experiences. These programs model the idea that giving something back to the community is an important college outcome, and that working with community partners is good preparation for citizenship, work, and life.

Internships
Internships are another increasingly common form of experiential learning. The idea is to provide students with direct experience in a work setting—usually related to their career interests—and to give them the benefit of supervision and coaching from professionals in the field. If the internship is taken for course credit, students complete a project or paper that is approved by a faculty member.

Capstone Courses and Projects
Whether they’re called “senior capstones” or some other name, these culminating experiences require students nearing the end of their college years to create a project of some sort that integrates and applies what they’ve learned. The project might be a research paper, a performance, a portfolio of “best work,” or an exhibit of artwork. Capstones are offered both in departmental programs and, increasingly, in general education as well.
Appendix S

Financial Implications of Retention Strategies

University of Colorado Denver
Anschutz Medical Campus · Downtown Campus

Office of Policy and Fiscal Analysis
Vice Chancellor of Administration and Finance

Fall 2010 Undergraduate Experiences Symposium
Financial Implications of Retention Strategies October 1, 2010

1. Hypothetical impact on tuition revenue
   - First-time full-time degree-seeking undergraduates, fall 2008 = 1,038
   - Fall 2009 actual retention rate for 2008 cohort = 69.6%
   - Initiate program with goal to retain 10 students (732/1,038) = 70.5%
   - Lower level resident undergrad tuition, AY10-11 = $6,216
   - Tuition revenue “retained” in year 2 = $62,160
   - Upper level resident undergrad tuition, AY10-11 = $6,672
   - Tuition revenue retained over 3 years = $195,600
   - Apply tuition rate inflation of 3% per year = $208,000

2. Implications for state funding to public institutions
   - Higher Education Strategic Planning Commission Draft Strategic Plan, September 2010
   - Lesson learned from University of Georgia (attachment)

3. Prevailing Research Findings on impacts of retention programs
   - Cost-effective implementation: Retention initiatives focused on student enrollment are estimated to be 3-5 times more cost-effective than new student recruitment efforts (Cuseo, 2007; Noel, Levitz, & Assoc., 1985)
   - Positive return on investment: Studies at two institutions (University of South Carolina and Bible Baptist College) found that for every $1 spent on first-year seminar course/program, over $5 was generated in tuition (Gardner, 1981; Barefoot et al, 1998).
   - Break-even analysis: At Seton Hall University, it was found that a freshman studies program would cover all costs if program could retain 21 students (2% of incoming class) who would have otherwise withdrawn (Ketkar & Bennet, 1989).

For more information contact:

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UC Denver Office of Policy and Fiscal Analysis
jonathan.lurie@ucdenver.edu
303-315-2832
Holding Presidents Accountable for Learning
September 23, 2010

In an uncommon strategy to improve graduation and retention rates, the Board of Regents of the University System of Georgia summoned the presidents of its 35 colleges and universities, one by one, to account for problems at their institutions and present three-year plans outlining how they hope to boost the measures of student success.

The systemwide challenge was issued earlier this year by Willis J. Potts, Jr., the straight-talking chairman of the Board of Regents and retired paper industry executive.

“We have a funding system here in Georgia that financially rewards institutions based on [enrollment] growth,” Potts said. “Having been in manufacturing, I know the factor that needs to be studied is what kind of finished product is coming out the other end. Less than 60 percent of the students in our system graduate within a six-year period. I know of no other process that would achieve 60 percent [success] and go out and brag about it.”

Reflecting on this, Potts said, he and his colleagues were driven to find out what was holding the system’s institutions back. So they went straight to the top — at each institution.

“We challenged every one of our 35 institutions to bring data to show where they’ve been, where they are and how they can get to where they want to go,” Potts said. “Some of the campus leaders were shocked when we told them what they had brought was unacceptable and asked them to come back again with different plans. Word spread rapidly among the other campus leaders and the quality of the plans and presentations improved. The tone of an organization is set by its leadership, so it was important for us to get in the weeds a little bit. It’s been a tedious exercise, but we’ve collected a lot of data and improvement plans to which our presidents will be held accountable.”

The regents’ interest in getting involved in the nuts and bolts of retention improvement is making system officials take notice — if only because most boards leave such academic matters to their presidents.

Susan Herbst, the system’s executive vice chancellor, who sat in on the meetings with all of the presidents, acknowledged that the board’s “direct interest” in these issues was “unusual,” but argued that it was proving beneficial.

“The board is trying to get in the black box of retention and graduation to try to understand what works and what doesn’t and why,” Herbst said. “Improving these rates is a national problem, and we’ve all written a lot about it, but this is a pretty bold attempt to get directly at it. Throughout this process I’m pleased to see that the presidents really take this personally. They really own this problem and realize they’re accountable for it.”

The sessions with the system’s 35 presidents sometimes resembled therapy sessions, Herbst added.
“These are hard times for both the regents and the presidents, so a lot of frustration was expressed,” she said. “But, in the spirit of Dr. Phil, you’ve just got to get it out on the table if you want to work together. It was very good on an emotional level.”

Herbst noted that some campus leaders came alone, while others brought scores of aides with them. Some who attended the meetings early in the process did not bring data-driven plans for improving student success measurements and were asked to come back with better answers, Herbst said. News of the regents’ tough stance on the review process quickly spread to all the other presidents.

Getting beyond the blame game, Potts said, was essential in talking to campus leaders about what they could change at their institutions to improve student retention. In other words, given that institutions simply will not get the kind of funding they would like, the regents wanted them to consider more cost-effective initiatives to boost retention and graduation.

“A liberal application of money can help anything,” Potts said. “But most of the things we’re talking about don’t involve money, they just involve attention. That’s what we’re learning. This work requires a caring spirit and that’s what we’re seeing throughout the system.”

Responses to Potts’s and the regents’ challenge varied from institution to institution, but there were commonalities, especially along sector lines.

Georgia State University, with 30,000 students, is one of the system’s four large research institutions. Not surprisingly, its student success marks are better than those of many of the system’s state and community colleges, which receive significantly less funding. Georgia State’s latest freshman-to-sophomore retention rate is 83.3 percent, and its most-recent six-year graduation rate is 49.6 percent. This leaves considerable room to improve, especially in order to rise to the numbers put up by the University of Georgia and the Georgia Institute of Technology, both of which have six-year graduation rates in the mid-to-upper 70s and are significantly more selective in admissions than is Georgia State.

Mark P. Becker, Georgia State’s president, said he welcomed the regents’ inquiry into his institution’s retention and graduation rates, noting that he has made improving them a priority since taking the presidency last year. He said the regents’ emphasis on student success mirrors a change of philosophy in higher education in recent years.

“For those of us in the baby boom generation, we always thought about college like, ‘Look to the left of you. Look to the right of you. One of the three of you won’t be here for graduation,’” Becker said. “It was survival of the fittest. Let’s throw everyone in the deep end and see who gets out alive. We were looking at things in a different way at Georgia State even before the regents came around to ask us what we were doing, so we’re glad our priorities are aligned. We know our graduation and retention rates aren’t going to skyrocket overnight, but we’re headed in the right direction.”

Since 2000, Georgia State’s freshman-to-sophomore retention rate has increased by nearly 10 percentage points and its six-year graduation rate has shot up by more than 20 percentage points. In the plan it presented to the regents, Georgia State noted that it hopes to keep up the forward progress during the next three years, boosting its freshman-to-sophomore retention rate to 84.9 percent and its six-year graduation rate to 51.2 percent. The university set these targets with some input from the board — as did all of the other state institutions with their own goals — and they were made with the knowledge that lasting change in such measurements is incremental and takes time.

To achieve that change, among other ideas, the university plans to encourage more than half of its freshmen to enter one of its many learning communities, in which entering students take four or five courses together during their first two semesters; boost the percentage of freshmen living on campus by at least 10 percent; and increase the number of freshmen who participate in peer tutoring by the same amount. All of these efforts’ abilities to boost retention are supported by data and are prime examples of the specific types of efforts Potts was looking for from university presidents in their meetings.

Daniel S. Papp, president of Kennesaw State University — with about 22,000 students, one of the system’s mid-sized “state universities”— was one of the campus leaders who were told to go back to the drawing board after an initial meeting with the regents.

“We were a bit surprised about that,” Papp said. “They wanted additional information on why folks left our institutions [before graduation]. They also wanted us to drill down further into the data we had specifically, for example, to assess the impact of some of the retention programs we had in place. They told us, ‘You’ve got to look at something more than just adding money to the equation, such as doing better advising.’ It wasn’t the least bit punitive. Rather it was like, ‘Have you considered this?’ Or, ‘Have you looked at this?’”
Kennesaw State's most recent freshman-to-sophomore retention rate is 76 percent, and its latest six-year graduation rate is 38 percent. Among other issues revealed in a self-study, the university found most students who dropped out said they did not receive enough academic advising and that student demand for courses exceeded availability. The three-year goals Kennesaw State presented to the regents are fairly ambitious. It wants to boost its graduation rate by 10 percentage points and hopes to do so by, among other projects, encouraging all of its students to take between 30 and 33 credit hours per academic year, increasing the number of hybrid and online course offerings, and helping its students plan their academic courseload at least two years in advance.

The situation at Georgia Perimeter College, which with more than 25,000 students is the largest two-year college in the system, is indicative of the uphill battle many community colleges in the state face when attempting to raise their retention and graduation rates. Its most recent freshman-to-sophomore retention rate is 63.2 percent, and its latest three-year graduation rate is around 9 percent. In its presentation to the regents, the college said that it hopes to boost its retention rate to 66 percent and its graduation rate to 9.4 percent.

Anthony S. Tricoli, Georgia Perimeter's president, however, offered a word of caution about these measures of success, which he deems incomplete.

“Our retention rates are based upon first time/full time students, at GPC this is only 12% of our total population; and in this population segment we perform about the national average (depending upon the criteria used),” Tricoli wrote in an e-mail. “The majority of our students enter GPC with the intention of transferring. So, we are not worried about the measurement of our success upon this criteria. Graduation rates for GPC is a bit more challenging however; as many of our students transfer from GPC prior to graduating. So the best evaluative criteria for us is retention and transfer.”

According to the latest figures available, 35.8 percent of first-time, full-time freshmen at Georgia Perimeter successfully transfer within three or four semesters. Also, a third of all of the system's transfer students come from the institution. Still, the institution did not set transfer goals in its report to the regents.

Concerns with measurements aside, the college outlined a number of ways it would work to improve student success. For example, it will encourage more of its incoming students to take a “first-year experience course” teaching them study methods; expand the number of faculty who serve as student academic advisers; and establish a college-wide “retention council” to monitor project results.

Presidents within the Georgia system praise the regents' focus on retention and graduation initiatives, even if it did mean putting the presidents on the spot about their campuses. Whether the attention from the regents will pay off remains to be seen—at least so far. Those involved with the meetings noted that, as a result of the dialogue, the state system could consider moving toward some level of outcomes-based funding and calculating its own in-system student success measures.

Potts, for one, says boards in other states should take note of the work being done in Georgia.

“It’s an issue of leadership,” said Potts, noting that he was very pleased with the meetings. “It’s an issue of designating what’s important to your organization and then demonstrating to that organization that you’re serious about what you profess. I think any trustee or regent worth their salt should be asking these types of questions.”

— David Moltz

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CU Denver Undergraduate Education Philosophy Statement

We believe undergraduate education transforms and enriches lives, and contributes to healthy societies. The foundations built [especially] in the first-year experience are critical to successful undergraduate experiences. We value the uniqueness of each student, and we will:

- Create and maintain an environment emphasizing relationships between faculty, students, and staff.
- Instill the values and expectations of the UC Denver community, including inquiry, reflection, critical thinking, collaboration, engagement, and lifelong learning.
- Provide University resources and support services that promote student academic, social, and personal success.
- Provide opportunities for development as individuals, as leaders, and as citizens of our local and global communities.
- Create a culture of inclusivity and diversity.
- Support all members of the UC Denver community through compassion, respect, and ethical behavior, and recognize the importance of exploration in identifying one's life's work.

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**ETHICAL REASONING VALUE RUBRIC**

*for more information, please contact value@aacu.org*

The VALUE rubrics were developed by teams of faculty experts representing colleges and universities across the United States through a process that examined many existing campus rubrics and related documents for each learning outcome and incorporated additional feedback from faculty. The rubrics articulate fundamental criteria for each learning outcome, with performance descriptors demonstrating progressively more sophisticated levels of attainment. The rubrics are intended for institutional-level use in evaluating and discussing student learning, not for grading. The core expectations articulated in all 15 of the VALUE rubrics can and should be translated into the language of individual campuses, disciplines, and even courses. The utility of the VALUE rubrics is to position learning at all undergraduate levels within a basic framework of expectations such that evidence of learning can be shared nationally through a common dialog and understanding of student success.

**Definition**

Ethical Reasoning is reasoning about right and wrong human conduct. It requires students to be able to assess their own ethical values and the social context of problems, recognize ethical issues in a variety of settings, think about how different ethical perspectives might be applied to ethical dilemmas and consider the ramifications of alternative actions. Students’ ethical self identity evolves as they practice ethical decision-making skills and learn how to describe and analyze positions on ethical issues.

**Framing Language**

This rubric is intended to help faculty evaluate work samples and collections of work that demonstrate student learning about ethics. Although the goal of a liberal education should be to help students turn what they’ve learned in the classroom into action, pragmatically it would be difficult, if not impossible, to judge whether or not students would act ethically when faced with real ethical situations. What can be evaluated using a rubric is whether students have the intellectual tools to make ethical choices.

The rubric focuses on five elements: Ethical Self Awareness, Ethical Issue Recognition, Understanding Different Ethical Perspectives/Concepts, Application of Ethical Principles, and Evaluation of Different Ethical Perspectives/Concepts. Students’ Ethical Self Identity evolves as they practice ethical decision-making skills and learn how to describe and analyze positions on ethical issues. Presumably, they will choose ethical actions when faced with ethical issues.

**Glossary**

*The definitions that follow were developed to clarify terms and concepts used in this rubric only.*

- **Core Beliefs:** Those fundamental principles that consciously or unconsciously influence one’s ethical conduct and ethical thinking. Even when unacknowledged, core beliefs shape one’s responses. Core beliefs can reflect one’s environment, religion, culture or training. A person may or may not choose to act on their core beliefs.
- **Ethical Perspectives/concepts:** The different theoretical means through which ethical issues are analyzed, such as ethical theories (e.g., utilitarian, natural law, virtue) or ethical concepts (e.g., rights, justice, duty).
- **Complex, multi-layered (gray) context:** The sub-parts or situational conditions of a scenario that bring two or more ethical dilemmas (issues) into the mix/problem/context/for student’s identification.
- **Cross-relationships among the issues:** Obvious or subtle connections between/among the sub-parts or situational conditions of the issues present in a scenario (e.g., relationship of production of corn as part of climate change issue).

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21 Excerpted with permission from Rhodes, *Assessing Outcomes and Improving Achievement: Tips and tools for Using Rubrics*. 

Appendix U

Sample VALUE Rubrics
Ethical Reasoning Value Rubric

For more information, please contact value@aacu.org

Definition
Ethical Reasoning is reasoning about right and wrong human conduct. It requires students to be able to assess their own ethical values and the social context of problems, recognize ethical issues in a variety of settings, think about how different ethical perspectives might be applied to ethical dilemmas, and consider the ramifications of alternative actions. Students’ ethical self-identity evolves as they practice ethical decision-making skills and learn how to describe and analyze positions on ethical issues.

Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance.

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Capstone</th>
<th>Milestones</th>
<th>Ethical Self-Awareness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>Student states either their core beliefs or articulates the origins of the core beliefs but not both.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Student states both core beliefs and the origins of the core beliefs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Student discusses in detail/analyzes both core beliefs and the origins of the core beliefs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Student discusses in detail/analyzes both core beliefs and the origins of the core beliefs.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Understanding Different Ethical Perspectives/Concepts</th>
<th>Ethical Issue Recognition</th>
<th>Application of Ethical Perspectives/Concepts</th>
<th>Evaluation of Different Ethical Perspectives/Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student names the theory or theories, can present the gist of said theory or theories, and accurately explains the details of the theory or theories used.</td>
<td>Student can recognize ethical issues when presented in a complex, multilayered (gray) context AND can recognize cross-relationships among the issues.</td>
<td>Student can independently apply ethical perspectives/concepts to an ethical question, accurately, and is able to consider full implications of the application.</td>
<td>Student states a position and can state the objections to, assumptions and implications of, and can reasonably defend against the objections to, assumptions and implications of different ethical perspectives/concepts, and the student’s defense is adequate and effective.</td>
</tr>
<tr>
<td>Student can name the major theory or theories she/he uses, can present the gist of said theory or theories, and attempts to explain the details of the theory or theories used, but has some inaccuracies.</td>
<td>Student can recognize ethical issues when issues are presented in a complex, multilayered (gray) context OR can grasp cross-relationships among the issues.</td>
<td>Student can independently apply ethical perspectives/concepts to an ethical question, accurately, but does not consider the specific implications of the application.</td>
<td>Student states a position and can state the objections to, assumptions and implications of different ethical perspectives/concepts but does not respond to them (and ultimately objections, assumptions, and implications are compartmentalized by student and do not affect student’s position.)</td>
</tr>
<tr>
<td>Student can recognize basic and obvious ethical issues and grasp (incompletely) the complexities or interrelationships among the issues.</td>
<td>Student can recognize basic and obvious ethical issues but fails to grasp complexity or interrelationships.</td>
<td>Student can apply ethical perspectives/concepts to an ethical question with support (using examples, in a class, in a group, or a fixed-choice setting) but is unable to apply ethical perspectives/concepts independently (to a new example.).</td>
<td>Student states a position but cannot state the objections to and assumptions and limitations of the different perspectives/concepts.</td>
</tr>
</tbody>
</table>
**Quantitative Literacy VALUE RUBRIC** *(for more information, please contact value@aacu.org)*

**Definition:** Quantitative Literacy (QL) – also known as Numeracy or Quantitative Reasoning (QR) – is a “habit of mind,” competency, and comfort in working with numerical data. Individuals with strong QL skills possess the ability to reason and solve quantitative problems from a wide array of authentic contexts and everyday life situations. They understand and can create sophisticated arguments supported by quantitative evidence and they can clearly communicate those arguments in a variety of formats (using words, tables, graphs, mathematical equations, etc., as appropriate).

**Quantitative Literacy Across the Disciplines**

Current trends in general education reform demonstrate that faculty are recognizing the steadily growing importance of Quantitative Literacy (QL) in an increasingly quantitative and data-dense world. AAC&U’s recent survey showed that concerns about QL skills are shared by employers, who recognize that many of today’s students will need a wide range of high level quantitative skills to complete their work responsibilities. Virtually all of today’s students, regardless of career choice, will need basic QL skills such as the ability to draw information from charts, graphs, and geometric figures, and the ability to accurately complete straightforward estimations and calculations.

Preliminary efforts to find student work products which demonstrate QL skills proved a challenge in this rubric creation process. It’s possible to find pages of mathematical problems, but what those problem sets don’t demonstrate is whether the student was able to think about and understand the meaning of her work. It’s possible to find research papers that include quantitative information, but those papers often don’t provide evidence that allows the evaluator to see how much of the thinking was done by the original source (often carefully cited in the paper) and how much was done by the student herself, or whether conclusions drawn from analysis of the source material are even accurate.

Given widespread agreement about the importance of QL, it becomes incumbent on faculty to develop new kinds of assignments which give students substantive, contextualized experience in using such skills as analyzing quantitative information, representing quantitative information in appropriate forms, completing calculations to answer meaningful questions, making judgments based on quantitative data and communicating the results of that work for various purposes and audiences. As students gain experience with those skills, faculty must develop assignments that require students to create work products which reveal their thought processes and demonstrate the range of their QL skills.

This rubric provides for faculty a definition for QL and a rubric describing four levels of QL achievement which might be observed in work products within work samples or collections of work. Members of AAC&U’s rubric development team for QL hope that these materials will aid in the assessment of QL – but, equally important, we hope that they will help institutions and individuals in the effort to more thoroughly embed QL across the curriculum of colleges and universities.

**Framing Language**

This rubric has been designed for the evaluation of work that addresses quantitative literacy (QL) in a substantive way. QL is not just computation, not just the citing of someone else’s data. QL is a habit of mind, a way of thinking about the world that relies on data and on the mathematical analysis of data to make connections and draw conclusions. Teaching QL requires us to design assignments that address authentic, data-based problems. Such assignments may call for the traditional written paper, but we can imagine other alternatives: a video of a PowerPoint presentation, perhaps, or a well designed series of web pages. In any case, a successful demonstration of QL will place the mathematical work in the context of a full and robust discussion of the underlying issues addressed by the assignment.

Finally, QL skills can be applied to a wide array of problems of varying difficulty, confounding the use of this rubric. For example, the same student might demonstrate high levels of QL achievement when working on a simplistic problem and low levels of QL achievement when working on a very complex problem. Thus, to accurately assess a students QL achievement it may be necessary to measure QL achievement within the context of problem complexity, much as is done in diving competitions where two scores are given, one for the difficulty of the dive, and the other for the skill in accomplishing the dive. In this context, that would mean giving one score for the complexity of the problem and another score for the QL achievement in solving the problem.
### QUANTITATIVE LITERACY VALUE RUBRIC

**Definition:** Quantitative Literacy (QL) – also known as Numeracy or Quantitative Reasoning (QR) – is a “habit of mind,” competency, and comfort in working with numerical data. Individuals with strong QL skills possess the ability to reason and solve quantitative problems from a wide array of authentic contexts and everyday life situations. They understand and can create sophisticated arguments supported by quantitative evidence and they can clearly communicate those arguments in a variety of formats (using words, tables, graphs, mathematical equations, etc., as appropriate).

**Evaluator's are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance.**

<table>
<thead>
<tr>
<th>Interpretation</th>
<th>Capstone 4</th>
<th>Milestones 3</th>
<th>Milestones 2</th>
<th>Milestones 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to explain information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words)</td>
<td>Provides accurate explanations of information presented in mathematical forms. Makes appropriate inferences based on that information. For example, accurately explains the trend data shown in a graph and makes reasonable predictions regarding what the data suggest about future events.</td>
<td>Provides somewhat accurate explanations of information presented in mathematical forms. For instance, accurately explains trend data shown in a graph.</td>
<td>Attempts to explain information presented in mathematical forms, but draws incorrect conclusions about what the information means. For example, attempts to explain the trend data shown in a graph, but will frequently misinterpret the nature of that trend, perhaps by confusing positive and negative trends.</td>
<td></td>
</tr>
<tr>
<td>Representation</td>
<td>Skillfully converts relevant information into an insightful mathematical portrayal in a way that contributes to a further or deeper understanding.</td>
<td>Competently converts relevant information into an appropriate and desired mathematical portrayal.</td>
<td>Completes conversion of information but resulting mathematical portrayal is only partially appropriate or accurate.</td>
<td>Completes conversion of information but resulting mathematical portrayal is inappropriate or inaccurate.</td>
</tr>
<tr>
<td>Calculation</td>
<td>Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem. Calculations are also presented elegantly (clearly, concisely, etc.)</td>
<td>Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem.</td>
<td>Calculations attempted are either unsuccessful or represent only a portion of the calculations required to comprehensively solve the problem.</td>
<td>Calculations are attempted but are both unsuccessful and are not comprehensive.</td>
</tr>
<tr>
<td>Application / Analysis</td>
<td>Uses the quantitative analysis of data as the basis for deep and thoughtful judgments, drawing insightful, carefully qualified conclusions from this work.</td>
<td>Uses the quantitative analysis of data as the basis for competent judgments, drawing reasonable and appropriately qualified conclusions from this work.</td>
<td>Uses the quantitative analysis of data as the basis for workmanlike (without inspiration or nuance, ordinary) judgments, drawing plausible conclusions from this work.</td>
<td>Uses the quantitative analysis of data as the basis for tentative, basic judgments, although is hesitant or uncertain about drawing conclusions from this work.</td>
</tr>
<tr>
<td>Assumptions</td>
<td>Explicitly describes assumptions and provides compelling rationale for why each assumption is appropriate. Shows awareness that confidence in final conclusions is limited by the accuracy of the assumptions.</td>
<td>Explicitly describes assumptions and provides compelling rationale for why assumptions are appropriate.</td>
<td>Attempts to describe assumptions.</td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>Uses quantitative information in connection with the argument or purpose of the work, presents it in an effective format, and explicates it with consistently high quality.</td>
<td>Uses quantitative information in connection with the argument or purpose of the work, though data may be presented in a less than completely effective format or some parts of the explication may be uneven.</td>
<td>Uses quantitative information, but does not effectively connect it to the argument or purpose of the work.</td>
<td>Presents an argument for which quantitative evidence is pertinent, but does not provide adequate explicit numerical support. (May use quasi-quantitative words such as “many,” “few,” “increasing,” “small,” and the like in place of actual quantities.)</td>
</tr>
</tbody>
</table>

Appendix U
Appendix V

Proposal for Budget for Additional Experiential Learning Center Staff

To: Rod Nairn, Provost
    Donald Elliman, Chancellor
From: John Lanning, Undergraduate Experiences
    Tony Smith, Experiential Learning Center
SUBJ: Fiscal Support for Experiential Learning Initiatives
DATE: 13 December 2012

The Experiential Learning Center is requesting additional funds for one full-time and two part-time staff in order to support expanded student learning through co-curricular, experiential education and to support the CU Denver challenge from the Chancellor to expand experiential learning opportunities for students.

Background

For many years, CU Denver experiential and career functions were combined under a Career Center banner. In approximately 2006, the campus separated experiential learning under the Experiential Learning Center and career support under a newly defined Career Center. In 2010, Tony Smith was hired to direct the Experiential Learning Center, and a revised campus-wide academic policy for internships was developed for undergraduate students.

The Experiential Learning center (ELC) is responsible for providing centralized administration and coordination of academic internships, not-for-credit internships, service learning, and community engagement activities (encompassing service learning, volunteer and civic engagement experiences) for undergraduate students on the Denver campus. The ELC also promotes and supports undergraduate research and international experiential learning opportunities.

Without additional budget or staff, the Experiential Learning Center has carried out significant accomplishments to improve experiential education opportunities for CU Denver undergraduate students. The ELC staff has worked hard to streamline processes for increased efficiency and to increase interaction with faculty seeking support for experiential learning. Highlights of these efforts include:

- In 2011-2012, the ELC placed 576 student interns, which is an increase of 43% over AY 2009-2012.
- The rate of internship placement has increased from 14% to 28% in the last 12 months.
- The ELC staff markedly increased contacts with the Denver business community, and 6021 employers are registered and active with the ELC in 2011-2012.
- The number of CU Denver students registered with ELC has increased by 35% over AY 2009-2012.

All Experiential Learning Center professional staff carry out 10-12 off-campus site visits per semester which equates to 216 new employer and community partner contacts per academic year. The number of community partners participating in the Volunteer Fair (Fall event) increased from 19 in Fall 2010 to 53 in Fall 2013. The Stop & Serve on-campus volunteer program has grown significantly since 2009 with 1,114 participants and 1,370 hours of service contributed by CU Denver students. The ELC works diligently to collaborate with many offices (Career Center, Learning Resource Center, Veteran Student Services, Office of Student Life) and is also happy to work as a liaison for the Vice Chancellor of Community Engagement on many outreach initiatives. Programs like the Boots to Suits program are benefiting student veterans in their transitions to the world of work using mentoring and internships as key resources for development.
Budget Request

The importance of experiential learning for improved career opportunities for undergraduate students is central to the role and mission of an urban research university. Over the last few years, CU Denver has discussed, but did not implement, making experiential learning a graduation requirement for the baccalaureate degree. In his Fall 2012 address to the campus, Chancellor Elliman challenged the campus to double the number of internship placements for students.

The budget request outlined below is specifically designed to:

- continue the ELC accomplishments initiated over the last 3 years
- recover the internship staff position lost during budget cuts prior to establishing the ELC office
- provide internship opportunities to Architecture and Planning and to Education and Human Development units offering baccalaureate degrees for the first time
- expand internship opportunities in Engineering and Applied Sciences
- meet the Chancellor’s challenge of doubling internship student placements

The Experiential Learning Center requests funding from the CU Denver campus to cover two positions (detailed position descriptions available upon request):

- FTE Experiential Learning Program Coordinator and Internship Advisor, $56,000 with benefits
  - This multifaceted position serves as a career coach and counselor to students while also creating, maintaining and facilitating relationships with faculty, employers and community partners. This position is integral to the function of internship placements but also protecting the university from the risk/liability involved with experiential learning. This position is consistent with existing internship coordinator/advisor positions.
  - Creation of new undergraduate programs necessitates professional level expertise to develop and manage growth for internships.

- Two part-time Graduate Internship Advisor positions, $20,000 no benefits
  - The ELC is able to do more with less by using two graduate internship positions as a win-win scenario. Students in local graduate counseling or higher education programs need to obtain contact hours for licensure and degree completion. These positions also serve in the role of internship advisor meeting the increasing needs of the campus.
  - The use of two Graduate Interns creates a savings of approximately $36,000 when compared to a second full-time staff position with benefits. This also adds to the flexibility, growth and development of experiential learning at CU Denver by collaborating with relevant graduate programs across the state.

The overall budget of $76,000 is divided into three sources of funds

- $31,000 request from the Provost (This proposal)
- $30,000 from current ELC budget – salary savings from previous ELC director position
- $15,000 student fee request to support increased internship programs (pending and subject to availability of campus funds) which include commitment from the Provost on the above request.
Appendix W: Learning Communities at CU Denver, Fall 2014 Pilot, Definition and Mission:

A CU Denver Learning Community (LC) is an integrated academic and co-curricular experience made up of a cohort of 24 students who take at least 2 connected courses together based around an academic theme. One of the courses in each community is a First Year Seminar. Students participate in activities outside of class that connect academic content with experiences related to their community.

CU Denver LCs create intentional, inclusive communities formed around common themes across disciplines where students learn together. LCs invite students to integrate their learning in and out of class by engaging in reflection. These communities cultivate holistic student growth and enhance learning by fostering collaborative and enduring connections among students, faculty, and staff.

Co-Curricular Learning Outcomes: Students who participate in Learning Communities will
- Transition to the academic and social aspects of college life through an intentional, supportive, and highly networked program.
  - Can identify strategies for being successful in college e.g. being involved, time management, taking ownership of your experience.
- Have a greater knowledge of the campus community
  - Can recall at least three on-campus resources
- Have a greater sense of their identity
  - Can articulate their personal interests, values, and abilities and how they related to their degree/career plan
- Feel more connected to campus
  - Can describe a meaningful experience they have had on campus and how it relates to overall academic and career goals

Goals of Learning Communities: Participation in learning communities has been proven to be a high impact practice in higher education and will make students more likely to return to CU Denver in subsequent semesters:
- Maximize academic success of student participants
- Foster a sense of community among first-year students, peer mentors, faculty, and staff
- Provide an opportunity for students to engage with faculty outside the classroom
- Provide support to students in their first semester and ease the transition to CU Denver
- Improve both engagement and satisfaction with the CU Denver student experience

Almost 60% of U.S. “Research Extensive” universities offer first-year learning communities to at least 10% of entering students.22

Key players
- Faculty across disciplines
- Academic advisors from various schools/colleges
- Student Affairs staff
- Peer mentors from the Peer Advocate Leader Program
- Director and Resident Advisors of Campus Village (for Living-Learning Communities)
- Learning Resource Center
- Center for Faculty Development

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Office of Undergraduate Experiences

Faculty requirements:
- Meet periodically with the learning community team, which can include university staff, peer advocates and resident advisors, and other faculty members within each learning community
- Engage with students both inside and outside the classroom
- Develop specific learning outcomes with other members of the learning community team and participate in a pre-/post-assessment of their students’ learning

Student requirements:
- Complete academic requirements related to their classes.
- Participate in co-curricular experiences including weekly activities such as study sessions, service projects, group dinners, social events, academic programs, and meetings with advisors.
- Fulfill all requirements on the Student Agreement

Timeline:
Feb/March: get faculty together to start planning their courses, define LC’s at CU Denver, mission, and learning objectives for LC’s at CU Denver, design marketing materials for orientation
Late Feb.: Hire PALs for each learning community.
Connect with each learning community support team (Faculty, staff, PAL, RA)
March: Gather CU Denver large group for campus wide meeting
Get together with Center for Faculty Development
Begin marketing LCs to students who have matriculated
Have faculty define specific learning outcomes for their community
April/May: Design assessment
Summer: Continuous marketing of LCs at New Student Orientation

LC#1: Opening Doors Learning Community
This learning community is designed for students who are undecided on their college major and/or career path. Participants in this community will take three courses linked together, which will include activities inside and outside the classroom focused on self-discovery, major/career exploration, and critical thinking skills. Participants will leave this community with a better understanding of themselves and the world around them. The three linked courses in this learning community are:
- Philosophy, PHIL 1012-Introduction to Philosophy: Relationship of Individual to the World, Monday/Wednesday 11:00-12:15
- English, ENGL 1020-Core Composition I, Monday/Wednesday 11:00-12:15
- Ethnic Studies, ETST 1111-Civil Rights Movement: 50 years later, Monday/Wednesday 3:30-4:45

LC #2: Discover Colorado Living-Learning Community
This learning community is focused on learning about Colorado through History, Archeology, and English. Students will have the benefit of small classes, a linked curriculum, and planned activities inside and outside of class time. Students must live in Campus Village Apartments to be a part of this community, which will further enhance their sense of community. The three linked courses in this learning community are:
- Anthropology, ANTH 1303-Introduction to Archeology, Monday/Wednesday 9:30-10:45 (lecture) and Monday 3:30-5:20 (lab)
- English, ENGL 1020-Core Composition I, Monday/Wednesday 11:00-12:15
- History, HIST 1111-Denver History: Finding Your Way Around, Friday 1:00-4:00