The JTFSO Subcommittee on Curriculum Innovation was charged with identifying ways that instructional improvement and innovation can enhance student learning, with an emphasis on current undergraduate students in residence. We believe improved access can also expand the campus’s reach beyond those in residence to include prospective UMass-Amherst students as well as life-long learners. By providing access to large and diverse populations, UMass Amherst can also serve as an important hub of learning for the Commonwealth.

The Subcommittee recognizes that student learning today is less hierarchical and more independent, networked, open access, and life-long. Newer technologies present challenges to traditional learning institutions and pedagogies yet also allow instructors to deliver content and engage students in innovative ways to suit diverse learning styles. The Subcommittee presents below a series of recommendations and rationales that emphasize innovative and adaptable institutions and processes to effectively and efficiently improve student learning. The Subcommittee cannot stipulate the best possible instructional innovations, and that is precisely the point of our recommendations: To continually innovate, UMass-Amherst needs nimble and appropriately resourced institutions and individuals dedicated to promoting innovation, an appropriately incentivized environment in which to innovate, and ongoing assessment of innovations and student learning outcomes.

Vice Provost for Educational Innovation

**Recommendation:** Appoint a new *Vice Provost for Educational Innovation* (VPEI), reporting directly to the Provost, whose mission is to facilitate the development of innovative pedagogies that improve student learning, reaching current and potential future (e.g., MA high schools and community college) students, on- and off-campus. The VPEI will be responsible for coordinating existing campus resources such as the Center for Teaching and Faculty Development, the Office of Academic Planning and Assessment, the Office of Information Technologies, the Center for Educational Software, and University Libraries, to promote pedagogically sound innovation, including the strategic use of technology.

**Rationale:** UMass Amherst has developed a range of novel pedagogies, curricula, and learning spaces (e.g., Team-Based Learning initiative, Integrative Experience, Learning Commons.) Such innovations are crucial for enhancing the residential student experience, and for reaching current and future students in the Commonwealth and beyond. To define the leading edge of pedagogical innovation, it is crucial that UMass Amherst appoints a leader to coordinate the resources necessary to advance the development of new curricula, pedagogies, teaching
technologies, and learning spaces. This new position should control sufficient resources to incentivize collaboration among campus faculty and staff, and to support educational innovation.

**Provost’s Committee for Educational Innovation**

**Recommendation:** Appoint a faculty-led *Provost’s Committee for Educational Innovation* (PCEI) to provide broadly representative consultation and input into major campus decisions regarding teaching and learning, including application and use of technology, new classroom buildings and renovations, and pedagogical improvements and innovations. We recommend that the committee catalog and promote instructional and curricular innovations, including activities to attract diverse and capable students and support their success; identify investment priorities, including funding and support for innovation; promote appropriate new instructional technologies; disseminate, mobilize, and coordinate participation across units; and assess student learning impacts systematically. We recommend a Vice Provost for Educational Innovation to chair the PCEI and assemble a broadly inclusive membership for greater perspective and increased opportunities for collaboration.

**Rationale:** Thoughtful consideration and implementation of instructional innovations should include broad and consistent input from faculty and instructional support institutions such as the CTFD, OAPA, OIT, University Libraries, etc. A Provost’s Committee on Educational Innovation would be charged with helping to develop long-term strategies and assess plans to advance teaching and learning, and to engage, represent, and disseminate information to relevant campus constituencies. The committee would also foster agility at a time of rapid changes in educational technologies and options available in higher education. The PCEI would enable the campus to coordinate responses to opportunities, address obstacles, and extend and promote areas of excellence so the campus can demonstrate the value of immersive residential education at UMass Amherst, compete for students in Massachusetts and nationwide, and best fulfill our teaching mission.

**Alternative Frameworks for Classroom Instruction**

**Recommendation:** The campus – led by the Provost’s office – should broaden its support for the use of technology in alternative forms of classroom instruction. A first step is to convene a campus-wide, faculty-led group, also involving CTFD and the OIT Office of Academic Computing, to develop a plan to leverage authoring, video capture, storage, and Internet-delivery technologies to enhance on-campus courses (including blended classes), as well to enable MOOC-style course offerings to off-campus audiences. The plan should encourage experimentation by early adopters and address incentivization, sustainability, and evaluation. A concrete goal should highlight the campus’s efforts statewide; we propose a policy that would
allow every high school and community college student in the Commonwealth to take online UMass-Amherst course offerings for free and for credit. The group should present its plan to the campus community by the end of 2013.

**Rationale:** UMass-Amherst should leverage new instructional technologies for the purpose of developing alternative approaches to instruction (e.g., blended classes, flipped classes, and distance learning in its many dimensions including MOOCs) in innovative, pedagogically sound and resource efficient ways. In the case of courses that can be offered at a distance, students who attend Massachusetts high schools and community colleges are an audience of particular interest. Offering classes to these students constitutes a wonderful outreach and recruiting tool for the campus. The campus should address the substantial institutional barriers that make such offerings – distance courses for free and for credit – difficult to implement.

**Resources to Support Innovation**

**Recommendation:** Commit resources commensurate with peer aspirant institutions to create an environment that fosters instructional innovation. Undertake a comprehensive review of staffing and budgets in key instructional and technical support areas to immediately address shortfalls and develop a long-term strategy. Focus resources on efficient and effective methods that foster student engagement and support key objectives such as effective communication, critical thinking, integrative application of knowledge, and team-based learning. Increase support staff and technicians to keep pace with innovations and reach a broader cross-section of faculty. Review infrastructure and classroom facilities needs in terms of media equipment, network access, and other improvements. Provide support and resources to faculty to pursue creative ideas, recognizing that different learning objectives require different levels of support. Put UMass Amherst in the forefront of developing the next generation of instructional innovations.

**Rationale:** Currently, efforts to promote and support curricular innovations are hampered by lack of staff in key support and technical groups, who are needed to set up, integrate, and maintain needed servers and processes. Up-to-date equipment is needed in classrooms so that innovative technologies are available to every instructor who wants to use them, and to the students who increasingly expect them. By increasing staff and resources, the University will ensure that instructors and instructional and technical support staff will be able to initiate pilots of new innovations (MOOCs, flipped classrooms), convert pilots into viable services (lecture capture, team-based classrooms), and expand the use of proven technologies (clickers, Moodle, OWL, streaming server) beyond a few innovators. In this way, more students will have access to proven teaching techniques and technologies that will help them succeed and improve their overall experience at the University.
Incentives for Innovation

**Recommendation:** Promote pedagogical innovation and evidence-based change in undergraduate education by strengthening institutional incentives. Both centrally and within colleges, apply four key levers that motivate instructors to experiment with new pedagogies and technologies. First, enhance funding for the most promising and effective professional development opportunities that include faculty learning communities (e.g., TBL and Lilly Teaching Fellows), grants to support innovative revisions to courses, and forums to disseminate promising projects. Second, build flexibility in workload allocation so that instructors have time to learn and apply new pedagogies and technologies. Third, create reward structures (e.g. tenure, promotion, merit processes) that value faculty time spent developing new pedagogies. Finally, ensure that academic leaders reward instructional innovations and name these activities as important values of the institution.

**Rationale:** To become leaders in curricular innovation, the University and its instructors must experiment with emerging educational methods and technologies, and adopt those that foster transformative learning experiences for students. Faculty have many reasons not to devote more time experimenting with new teaching methods and tools, especially given the potential costs of such investments (e.g., valuation of research over teaching in salary, time, resources, prestige, tenure, and promotion). Engaging the average instructor in pedagogical innovation that will meet the important learning needs of students will require institutional support. The ultimate goal of the University is to advance the learning of its students; however, more learning is unlikely to occur without support for instructors and the quality of their work life.

Assessment of Innovations and Student Learning Outcomes

**Recommendation:** Provide appropriate support for systematic assessment of innovative pedagogies and student learning outcomes, so that evaluation strategies are embedded in instructional and curricular innovations. Evaluate the effectiveness of innovations to provide ongoing and substantive feedback to faculty and appropriate stakeholders to continually improve instruction and student learning, with a particular focus on assessing transferable skills such as teamwork, integration, reflection and lifelong learning. Support faculty involvement in assessments to provide feedback and promote evidence-based changes. Encourage administrative and faculty research into the effectiveness of innovation.

**Rationale:** Investment in innovation requires systematic and ongoing assessment of and adaptation to specific learning environments. Faculty involvement throughout is critical to design appropriate evaluations and provide feedback for ongoing curricular and pedagogical changes. Assessment embedded in the fabric of
instructional innovation would draw on areas of excellence that already exist on campus as well as faculty whose research focuses on assessing learning outcomes. These efforts need to be supported, coordinated, and extended. Investments become strategic when they are aligned with campus goals, evaluated rigorously and systematically, and the results are shared and influential.

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