

Provost's Taskforce for Hybrid and Online Education

Final Report

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Background

Online and hybrid (hereafter: online) education is an increasingly popular educational modality. Through the University of California Office of the President, UC Riverside has received Innovative Learning Technology Initiative (ILTI) grants to create 52 online courses. Faculty have also independently created online offerings in a number of instances. Additionally, UCR now offers an Online Masters of Science in Engineering degree available fully online and an MFA in Creative Writing that is based at the Palm Desert Center and delivered entirely online except for a small number of weekend meetings.

As the popularity of online education grows, so too does research surrounding best practices and student outcomes.^{1,2} A growing body of knowledge provides strong evidence that when instruction is delivered online using best practices, it is at least equally as effective as traditional face-to-face instruction.^{3,4} Similar results have been observed at UCR. A 2018 analysis by the UCR Director of Evaluation and Assessment of 29 courses for which there were both online and face-to-face offerings in the same calendar year found “there were small differences in grades and student evaluations noted when a matched subset of these online courses was compared to the same course offered in person.” The differences generally favor the online offering, particularly for undergraduate courses in the areas of attendance and preparation.

With the increased feasibility and interest in online education, along with growing campus interest in online instruction, UCR needs to be more deliberate about its approach to online education, critically evaluate the costs and benefits of online education, and adopt near- and mid-term strategies for pursuing online education and achieving specific goals.

To that end, Provost Larive created the Taskforce for Hybrid and Online Education in February 2018 to address the following questions:

- What are the main motivations for pursuing more hybrid/online instruction and what are the associated benefits that UCR stands to gain?
- Which courses or types of courses should be prioritized?
- What should be our goals for the next 3-5 years?
- What should be our strategy to achieve those goals? In particular, how should we organize ourselves? What, if any, additional staffing and technology needs are anticipated? What kinds of space and financial resources are anticipated?
- Other issues the taskforce deems important for establishing a coherent hybrid/online strategy for our campus.

To help answer these questions and develop recommendations for a UCR online strategy, the taskforce undertook three lines of research:

- Surveyed UCR faculty and students about online education.
- Met with UCR staff who currently support online course development and delivery.
- Interviewed leaders in online education at other institutions.

¹ <https://ecampus.oregonstate.edu/research/projects/online-learning-efficacy-research/>

² <https://www.qualitymatters.org/>

³ <https://link.springer.com/article/10.1007/s10639-018-9707-5>

⁴ <http://sr.ithaka.org/publications/online-learning-in-postsecondary-education/>

Surveys of faculty and students were conducted in early June and elicited responses from 198 faculty (including 158 ladder faculty) and 504 students (including 413 currently enrolled undergraduates). Meetings with staff focused on Information and Technology Services and included AVC/CIO Danna Gianforte and Associate Director for Instructional Design Sheryl Hathaway. Interviews with leaders at other institutions were conducted in June and July. The taskforce was careful to select campuses where there was likely to be meaningful overlap in terms of mission, values, and student demographics. Thus we reached out to leaders at UC Irvine (UCI), Oregon State University (OSU), Arizona State University (ASU), Portland State University (PSU), and the University of Central Florida (UCF). The remainder of this report summarizes what we learned and how we think UCR should proceed.

Motivations and Benefits

The main motivations for increasing UCR's online presence should be to promote access and student success, while maintaining instructional quality and equity. The main benefits of doing so are inherent in our institutional mission.

Although many of the motivations for providing more online instruction mirror the motivations for providing more course availability generally, especially as it relates to seat availability for critical courses for graduation, the two most fundamental benefits are improved access and student success. Foremost, online courses will help students with highly constrained schedules. According to the 2016 UC Undergraduate Experience Survey⁵, 49% of UCR students say that job responsibilities are an obstacle to academic success occasionally, frequently, or all of the time. Family responsibilities are also a challenge occasionally, frequently, or all of the time for 65% of UCR students compared to 56% for UC students system-wide. The average student respondent to the taskforce survey lives 25 miles from campus and works half-time for 8 months of the year. Additionally, 90% of student respondents strongly or somewhat agree that UCR would better accommodate their schedule with online course offerings. UCR faculty concur, with 67% of respondents strongly or somewhat agreeing that students will benefit from flexibility. Consequently, the flexibility of online education for students with highly constrained schedules and its impact to student progress is a central motivating factor for online instruction.

In addition to facilitating access and progress to degree, a greater online presence also will promote student success (achievement) for those students who prefer online delivery. Such students who responded to our survey expressed affinity for certain aspects of online pedagogy that they feel are beneficial for their learning. Of the 235 student respondents who had previously taken a fully online course, a majority felt that the fully online course was better than a face-to-face course in terms of providing clear and understandable expectations, providing content that was well-organized and easy to access, and facilitating time management and adherence to deadlines. Many students provided open-ended responses that lauded the benefits of being able to learn at their own pace, including the ability to pause, rewind, and replay lecture segments for better understanding. The 156 student respondents who had previously taken a hybrid course provided similar and, in most cases, even stronger positive feedback about pedagogy in those courses, with many characterizing hybrid courses as providing the best of both online and face-to-face. However these sentiments are not uniformly held by all students, underscoring the desirability of offering courses (or sections of a course) in different modalities to best serve students and their learning preferences.

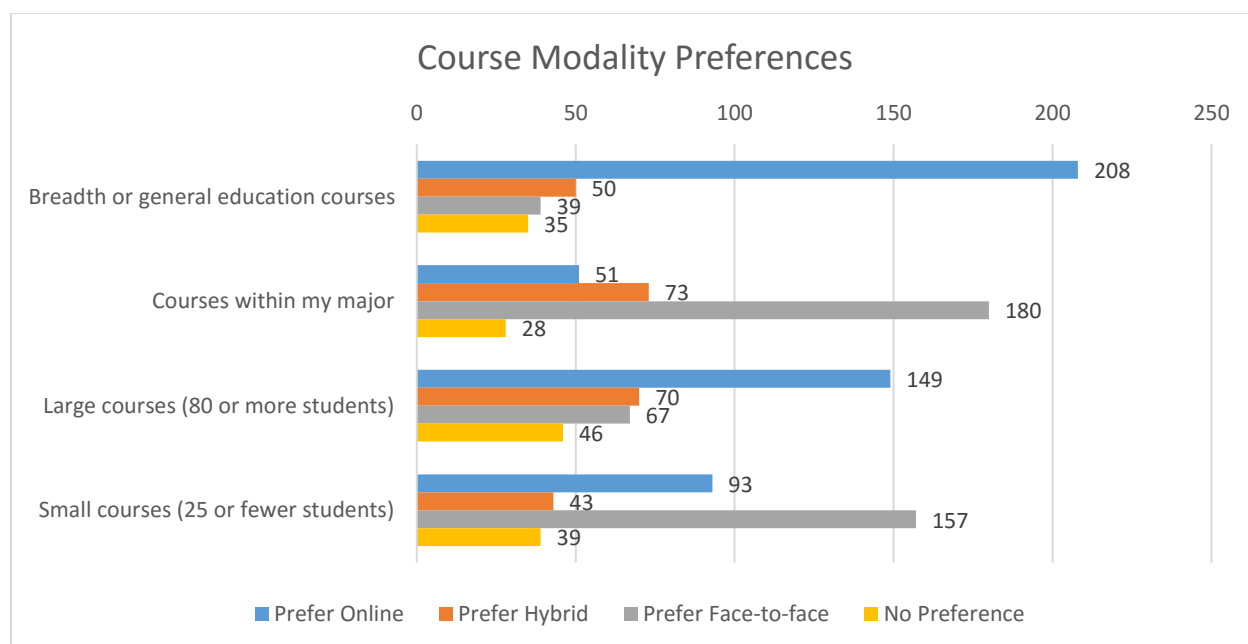
⁵ http://ueeval.ucr.edu/2016_UCUES_UCR_Systemwide_Report.pdf

The task force also found that online instruction can help alleviate various campus space constraints, including seat availability, parking availability, and other congestion related-issues. Although the taskforce views each of these motivations as being of lesser importance than access and success, concerns about seat availability are particularly noteworthy. Although UCR currently has sufficient space to offer face-to-face courses for students, to do so it must utilize times and sometimes locations (e.g. the University Village Theater) disfavored by both faculty and students⁶. Many faculty surveyed would prefer more physical space offerings for in-person instruction (some of which will be provided in the new Student Success Center, and through renovations to existing spaces on campus), but given current and likely future constraints on space, online instruction can provide more options for both students and faculty who have an interest in online course offerings.

Priority Courses

UCR should prioritize large and/or general education courses for online delivery, especially those that create bottlenecks for students.

The 332 students who responded to our survey question about course modality exhibited clear preferences for large courses and general education courses to be offered online. Students overwhelmingly prefer the idea of taking online courses when that course is outside their major (78%), compared to within their major (37%).



Similarly, a majority of faculty respondents (54%) also strongly or somewhat agree that UCR should offer more online options to students in bottleneck or gateway courses where appropriate to do so. The taskforce concurs that focusing on large courses and general education courses, particularly those that

⁶ “Student desires for start and end times follow a nearly perfect bell curve, with the largest preference for classes that begin between 10:00 and 3:00.” Course Scheduling Student Survey Summary, <https://provost.ucr.edu/StudentScheduleSurveySummary.pdf>

create bottlenecks, would be a promising strategy. Such bottlenecks often result from large waitlists with few options for course substitutions, exacerbated by high rates of students receiving a grade of D or F, or withdrawing and thus needing to retake the course. Moreover, if the campus focuses on moving breadth courses online, then it can help facilitate online migration of entire programs down the line, if and when that is viewed as desirable. Interviews with other campuses showed that once general education courses were available, departments found it much easier to transition their majors online, as well. However, the taskforce does not feel that the campus should focus on putting entire programs online. Rather we envision our campus remaining residential, but with on-campus students taking more online courses as part of their (primarily) face-to-face degree programs.

Campus Goals

UCR should aim to put 50 courses online each year for the next five years, beyond new ILTI courses. In the longer-term, UCR should aim to deliver around 25% of its courses online.

The primary goal of online instruction should be no different from traditional face-to-face instruction: to provide an excellent education to our students. But more germane to growing UCR's online presence, the taskforce feels that a short-term goal of 250 new online courses (in addition to new ILTI courses) within 5 years would be both achievable as well as a significant increase over business as usual. To put this goal in context, first note that UCR currently puts around 10 ILTI courses online each year. UCI has averaged 15-20 per year in the past but last year put 50 new courses online. OSU has created 1,200 courses over 16 years (75/year) but currently can produce around 45 per year. ASU currently creates around 100 each year. Second, consider that UCR currently offers around 900 course sections each quarter (excluding summer) that satisfy breadth requirements and have no prerequisites. Currently we offer, on average, 35 online sections each quarter. Even if all of these online sections are breadth courses with no prerequisites, online offerings currently amount to less than 4% of these 900 sections. With 250 new such online courses, and assuming two sections of each course offered per year (consistent with our existing online courses), online sections could account for as much as 22% of these breadth courses. This would be a significant improvement in online course availability for our students and would provide roughly 8,500 virtual seats for students each term.

In the longer term, the taskforce believes that UCR should aim to deliver about 25% of courses online. To put this in context, currently PSU delivers 18% of all credit hours online and is aiming for 25-33% within 5-6 years. UCF currently delivers 42%, and has an approach to online delivery that is similar to our recommendation for UCR: using online courses to better serve on campus students rather than focusing on growing enrollment through fully online degree programs. The taskforce believes that 25% also sends an appropriate signal to students and other stakeholders that UCR's educational philosophy remains grounded in the residential university experience.

Campus Strategy

Our recommended strategy includes the following key elements:

- 1. Prioritize large courses and/or general education courses, especially bottlenecks.***
- 2. Work with willing faculty members and provide appropriate support and incentives.***
- 3. Restructure parts of Information Technology Solutions (ITS) and the Center for Teaching and Learning (CTL) to build sufficient institutional capacity.***
- 4. Engage the Academic Senate on topics in need of a shared-governance approach.***

Below we provide brief remarks on each of these elements. Taskforce members would be happy to discuss any of these in more detail.

1. *Prioritize large courses and/or general education courses, especially bottlenecks.*

This strategy has been motivated and discussed in a preceding section of this report.

2. *Work with willing faculty members and provide appropriate support and incentives.*

The campus should, inasmuch as possible, engage those faculty with an interest in online education. The faculty survey showed that fully two-thirds of respondents either have taught online, are in the process of creating or teaching online for the first time, or are interested in teaching an online course. Only one-third expressed no interest. This latent demand seems more than sufficient to achieve the goals laid out in this report. The taskforce also expects that this approach will lead to further shifts in attitudes among the faculty, as has happened previously at the campuses we interviewed. These shifts will create new opportunities and will eventually require establishing new priorities, goals and strategies.

Although most UCR faculty say they are interested in online education, very few have acted on that interest, which implies barriers to participation. The campus administration can help reduce barriers and promote participation by creating an environment in which faculty feel supported and incentivized to pursue online delivery.⁷ We asked faculty about things that would help make it easier to create or teach online courses, and received these common responses:

- Financial support (e.g. teaching buyouts, summer/research support, TA funding)
- Technical support (including sufficient instructional design capacity, a one-stop-shop for troubleshooting, and a high-quality LMS)
- Training (for both instructors and TAs)
- Clear ownership of intellectual property
- Teaching load credit when delivering an online course
- Confidence that students want online courses and will be engaged
- Examples from faculty who have succeeded

Financial Support

Direct financial support for online course conversions is commonplace, and the taskforce recommends that UCR adopt such an incentive. Of the five campuses we interviewed, only UCI does not offer a campus-backed financial incentive; UCI also has the smallest online presence of these campuses. The rationale for a financial incentive is that converting to an online delivery mode requires substantial time and effort from a faculty member—beyond the normal effort required to refresh a traditional course periodically without changing to an online mode. Refreshing an online course also may entail significant additional effort, for example, if videos must be edited or re-recorded or new technologies must be adopted (e.g. due to changing licensing agreements or obsolescence of software). However, the taskforce considers the start-up costs for *new* courses to be comparable across delivery modes.

⁷ To be clear, we envision this support being funded by the campus, not by faculty grants for individual courses (e.g. ILTI). Although faculty should continue pursuing ILTI grants, the taskforce feels strongly that the campus must also provide support for faculty without extramural funding for course conversions.

Therefore, the taskforce recommends prioritizing incentives for course *conversions* and to a lesser extent for *refreshing* online courses, with a substantially smaller emphasis on *new* courses. The size of the financial incentive varies across the campuses we interviewed, but the magnitudes are relatively close:

- ASU: \$5,000-\$7,000 per course provided to the department with some pass-through to the instructor, after the course is complete.
- OSU: \$3,000-\$5,000 per course provided to the instructor, after the course is complete.
- PSU: \$3,500 per course provided to the instructor.
- UCF: \$2,500 per course provided to the instructor.

As other campuses have done, the taskforce recommends choosing a relatively high incentive level initially and then ramping down over time. This will help to get the initiative moving with a strong push that can then be reduced in response to culture change and a track record of success. The taskforce believes the incentive should go directly to the faculty member rather than to departments. Funds could be used for summer support or to fund research activities. In addition, the taskforce supports offering a teaching release to help support course conversion, particularly for faculty who are converting a course for the first time and therefore must become familiar with the process and technologies. Teaching releases should be coordinated in advance with department chairs to limit impacts on the curriculum. Resources to support teaching releases would go directly to departments.

Similar to OSU and PSU, we recommend establishing a periodic (at least annual) call for proposals with clear selection criteria to apply for these funds (and, by extension, access to relevant technical support). These criteria should include things like: whether the course satisfies any breadth requirements, recent enrollment levels, waitlist sizes and DFW rates, how often the course will be offered, evidence the instructor has (or will acquire) sufficient familiarity with online pedagogical tools and practices, plans to incorporate best practices into the course design, and possibly others. Proposals should be evaluated by a committee, possibly including deans from the larger colleges (as is done at PSU). The same committee also should monitor progress and considering withdrawing funding from projects that are not making adequate progress.

Technical Support

To move general education courses online, the campus needs to expand its current capacity for creating and supporting online courses. Through interviews with other campuses as well as local faculty experience, it is essential to have local experts that can help faculty transition from in-person instruction to the online context. This is a labor-intensive process, but it seems that having experts who understand the local context, become familiar with faculty preferences, and gain trust and understanding over time can best aid in the creation of online courses.

Institutional capacity for online instruction as measured by “courses moved online per term” is very difficult to quantify precisely. Roles and responsibility for instructional designers (IDs) vary widely by campus. For instance, some IDs also bear partial responsibility for media creation, research, or programming related to pedagogy generally. Measured productivity also varies with output quality, types of courses being converted, and faculty expertise—including their level of familiarity with the course design process. Some reported statistics also mix course updates with new course builds. The taskforce heard estimates ranging from 4 to 25 courses/year per ID. UCOP and UCR estimates are closer

to 6-10 courses/year per ID. The taskforce feels that UCR might be able to achieve up to 8 courses/year per ID, given anticipated conditions on campus in the near future.

Sufficient technical support also includes the services alluded to above: lecture capture, editing, 3rd party application integration, trouble-shooting and more come to bear on the process of creating and supporting online courses. To this end, it seems wise to create a director-level position that oversees instructional designers and has a close working relationship or direct reporting relationship with ITS's Multimedia Technologies group, which includes classroom technology. Such a role would make sense under the Center for Teaching and Learning (CTL) at UCR, and would mirror organizational structures found at other campuses (more on this in the next subsection of this report). The taskforce prefers a lean administrative structure, possibly employing a part-time director initially, and recommends that administrators have previous or ongoing experience with teaching and/or course design.

Finally, a high-quality learning management system (LMS) is an essential technical support component. The taskforce endorses the work already underway to evaluate and transition to Canvas (from Blackboard) as UCR's learning management system. Through both interviews with other campuses and the experiences of taskforce members, we believe this will facilitate the transition to online education for most faculty, as well as provide a better experience for both students and instructors.

Training

Teaching quality varies within all modes of delivery, and the taskforce strongly believes that UCR should strive to better assess and improve teaching whether online or face-to-face. But our charge is to consider online instruction specifically, and for this we feel that robust training should be made available and strongly encouraged, especially for first-time online instructors. Training for online instruction provides multiple benefits. Foremost it promotes high quality online teaching and student success. But it also fosters more thoughtful course proposals, familiarizes faculty with universal design principles and accessibility issues, makes the course design process run smoother and reduces workload for instructional designers and related support staff. Training also can help faculty avoid dips in their teaching evaluations that often happen after a course undergoes a significant redesign. Mandatory training programs for faculty are common at other campuses.⁸ ASU requires a 2-week online course, OSU requires a 2-quarter sequence, and UCF requires a 2-semester sequence. The ASU course focuses on familiarizing faculty with the instructional capabilities of the LMS through the eyes and experiences of an online student, which has the added benefit of building understanding and empathy for instructors who have never taken a course online. The OSU program requires participants to produce a module for their course that later will be built by an instructional designer. However, training is of less value when faculty have prior online experience or have independently educated themselves about online pedagogy. Taskforce members view these tradeoffs differently and disagree about whether training should be mandatory, but agree that training should be made available and that "sufficient familiarity with online pedagogical tools and practices" should be a prerequisite for receiving campus-backed course design support.

⁸ Mandatory training for TAs is less common. However, the taskforce believes it is essential to provide instructor training for online TAs, as well, especially given the implications of poor TA evaluations. Ideally this would be integrated into standard TA training, rather than as an add-on when a TA is assigned to an online class.

The OSU training program also requires that all courses are consistent with templates established by Quality Matters.⁹ Quality Matters is a leader in helping faculty ensure their online courses meet quality educational standards. Growing out of a federal Fund for the Improvement of Postsecondary Education (FIPSE) grant awarded to the MarylandOnline consortium of schools, Quality Matters offers a rubric of course design standards to create a scalable quality assurance system.¹⁰ They also offer training for faculty interested in online education. Over 1,300 colleges and universities subscribe to the Quality Matters program and use the rubric. Given current concerns among some faculty about online instructional quality, and the relatively low cost of institutional membership (\$1,750 or \$3,465 per year for access for all faculty and staff, depending on the benefits desired), the taskforce recommends that UCR subscribe so that these resources are available to faculty who want to integrate them into their course design process.

OSU has found that students tend to seek out courses that go beyond the basic Quality Matters template and achieve “QM-certified” status. OSU has capitalized on this by creating awards for faculty who teach “QM-certified” courses, thus enabling faculty to more readily document their efforts in their merit/promotion files. Although the taskforce understands the benefits of such awards (e.g. helping to normalize online instruction), we believe that UCR would benefit most from encouraging all faculty to implement best practices in course design.

The taskforce also believes that we should take advantage of our own faculty expertise in online instruction. UCR faculty with online instruction experience are well-suited to assist in some aspects of developing or transitioning new online courses, and should be encouraged to help their colleagues adopt discipline-specific best practices and avoid reinventing the wheel. The taskforce also notes that UCR is currently running an introduction to online instruction via the Summer Teaching Institute¹¹ that serves as a primer on what UCR can do in this regard to train faculty.

Intellectual Property

Private service-providers who help faculty develop online courses sometimes make intellectual property claims on the materials developed for those courses. In some cases, neither the faculty member nor the university is able to use the materials after the partnership with the provider ends. This has undoubtedly contributed to concerns among some faculty about the risk of losing their intellectual property rights when designing online courses, which tends to diminish interest in online instruction. The campus should avoid entering into agreements with such providers and should make clear that ownership of course materials created for online instruction is governed by the same UCOP policy¹² that applies to traditional face-to-face courses.

Teaching Load Credit

Some faculty appear to be under the impression that online instruction does not carry teaching load credit. Faculty who teach online courses as part of their regular teaching load have always received full teaching credit for doing so. The campus should clear up any misperceptions about this policy.

⁹ <https://www.qualitymatters.org/>

¹⁰ The Online Learning Consortium offers a similar rubric, free-of-charge: <https://onlinelearningconsortium.org/>

¹¹ http://engage.ucr.edu/learning_studio/stir.html

¹² <https://policy.ucop.edu/doc/2100004/CourseMaterials>

Student Readiness and Engagement

Students should understand what is needed for success in an online course before registration. A variety of self-assessment tools for student preparedness for online education exist.¹³ Some of these questions were integrated into our student survey, indicating that the student body is overwhelmingly prepared for online courses. However, providing a UCR-specific self-assessment tool to help students gauge if online courses are right for them may be valuable. Furthermore, it would be helpful to create a short student training module that could be completed before the start of the term. If properly designed, this module could be incorporated into online course templates as “week 0” work.

Students and faculty both expressed concerns about potentially challenging or diminished interactions in online courses. This was viewed by students as the main drawback of online delivery. Faculty also are concerned about the level of student engagement in online courses. Taskforce members noted that online delivery provides multiple tools to promote student-student and student-instructor engagement, including live webcam video, live chat, and asynchronous discussion boards. The taskforce recommends that the campus view student engagement as an underlying design principle that should be built into both support services (e.g. training and technology) and individual courses to help ensure a high-quality learning experience.

Examples of Success

Other campuses report that the best way to convince more faculty to consider online delivery is to demonstrate success among the early adopters. This was a common refrain, with leaders recalling the initial skepticism that existed before each campus reached its tipping point, after which there was a marked increase in the demand for instructional design and related support services. UCR already has brought to campus an expert from ASU, Tom Fikes, who shared their data comparing student performance in online and face-to-face courses.¹⁴ While evidence of successful outcomes can be found on many campuses that have grown their online offerings,¹⁵ UCR examples—both data and anecdotes—will be much more compelling. Getting UCR to its own tipping point will require time, but can be facilitated by collecting information on outcomes and sharing the results widely.

3. Restructure parts of ITS and the CTL to build sufficient institutional capacity.

To achieve greater strategic and academic alignment, the taskforce recommends moving the instructional design and training components of online teaching from ITS to the Center for Teaching and Learning within Undergraduate Education. This organizational structure would be similar to some, but not all, of the comparison campuses that we considered. UCI's online education office is in a Center for Teaching and Learning located within Undergraduate Education. UCF also has a centralized ID capacity, located in a CTL that is charged with supporting all delivery modalities and collaborating closely with the diversity office. PSU also has centralized ID support within an Office of Academic Innovation that supports all pedagogies. However, ASU and OSU have moved to more distributed organizational models.

¹³ <https://www.csustan.edu/academics/online-programs/online-readiness-self-assessment>

¹⁴ <https://mediasite.ucr.edu/Mediasite/Play/c398161721ca45968d9857aca45aa6021d>

¹⁵ Means, B., Toyama, Y., Murphy, R., Bakia, M., and Jones, K. (2010). Evaluation of Evidence-based Practices in Online Learning: A Meta-analysis and Review of Online-learning Studies. Washington, D.C.: U.S. Department of Education. Available at <https://provost.ucr.edu/searches/private/finalreport.pdf>

The taskforce does not recommend also moving multi-media and classroom technology support to the CTL, believing that this expertise is better aligned with the ITS mission. Moreover, based on our student survey, the taskforce anticipates that ITS will see increased demand from students enrolled in online courses for troubleshooting issues related to WIFI connectivity, video playback, webcam use, etc. This may create additional technology support staffing needs (unrelated to classroom technology) within ITS.

Beyond organizational realignment, achieving the proposed goal of 50 additional online courses per year will require additional resources. Appendix A contains a proposal from UCR's Information Technology Solutions for supporting a *total* of 50 courses annually.¹⁶ The proposal estimates an annual cost of \$2.38M, which includes current funding for Academic Engagement of around \$614,000. However, the taskforce believes that this cost could be reduced by around \$548,000 (to \$1.8M annually, or about \$1.2M more than UCR currently allocates) through a combination of merging some of the proposed positions, relying on support staff in other units, and achieving greater efficiencies:

- The proposal includes an Associate Director, a Portfolio Manager, and two Principal Instructional Designers. The taskforce feels that the work of the Portfolio Manager could be shared by the other three positions. Savings: \$149,400.
- The taskforce recommends removing the Evaluation Specialist and instead utilizing UCR's Director of Evaluation & Assessment. Savings: \$149,400.
- The taskforce recommends removing the Financial/Administrative Analyst and instead utilizing staff support in Undergraduate Education. Savings: \$124,500.
- The taskforce recommends removing one Instructional Designer anticipating greater efficiencies due to expanded use of course templates and increasing faculty familiarity with the course design process. Savings: \$124,500.

In addition, the taskforce is aware that the campus is currently investigating the "iOPM" model offered by Noodle Partners as a possible way to achieve flexible and cost-effective expansion of our base capacity.¹⁷ The taskforce believes this could be a promising option, and notes that the flexibility also would be helpful for accommodating near-term changes in the ILTI program and associated impacts on workload for the Academic Engagement team.

Finally, although these costs may seem significant, we note that they also offset some of the need for physical classroom seats. The taskforce is aware of current plans to use \$50M in state funds to build around 1,000 classroom seats. Although direct comparisons are difficult, \$50,000 per seat is also a significant cost.

4. Engage the Academic Senate on topics in need of a shared-governance approach.

¹⁶ The ITS proposal is best viewed as an estimate of annual cost for 50 courses per year in the event the ILTI program is discontinued. Adding current ILTI support costs to the proposal estimate would double-count some functions (e.g. supervisory) and produce an over-estimate of costs to continue support for ILTI and also add 50 new courses per year as proposed in this report.

¹⁷ In our investigation, we found that third party Online Program Managers (OPMs) often represent a price premium compared to campus resources, but provide budget flexibility. The iOPM model by Noodle Partners (<https://www.noodle-partners.com>) purports to be the most cost-effective third-party solution currently available, focusing on expanding campus capacity for building online courses rather than increasing enrollments in online programs.

The taskforce is aware that the Academic Senate also has established a committee to consider issues related to online education, and that there already has been some coordination between the provost's office and the senate regarding the charges for the two groups. During our own conversations, the taskforce raised several important issues that are beyond our purview but that we feel strongly should be addressed through shared governance. We list these here for completeness.

- Recognition and/or expectation of evidence of teaching innovation in the merit/promotion process would help to promote high quality teaching across all delivery modes, and reduce barriers to adoption of online instructional technologies.
- The current definition of "contact hours" is outmoded. A new definition is needed to account for the various ways students interact with faculty, teaching assistants, and other course materials across all delivery modalities.
- Teaching evaluations (for both faculty and TAs) need to be changed to accommodate online courses. Some questions currently used for face-to-face course evaluations are inappropriate for online courses. A related issue is: who is being evaluated when a faculty member teaches an online course that was designed by a colleague? For the benefit of our students, the Academic Senate also should consider making public certain elements of teaching evaluations (e.g. aggregate numerical scores) for both traditional and online courses.
- Comparing the relative teaching loads of different courses is already a fraught topic, even without the added complication of online delivery. Although this issue needs more thought, the taskforce feels that any policy decisions about online teaching loads would be premature at this time, given the nascent state of online education at UCR. At present, the taskforce finds merit in adopting the model that the effort required to offer a course online versus in a traditional mode is roughly equivalent, and hence the teaching load credit is not specific to any delivery mode.
- The taskforce is aware of past proposals to create special approval processes and requirements for online courses. We feel strongly that doing so would impinge upon the freedom of faculty members to choose how they teach. Faculty who want to teach online should be enabled by their colleagues to do it well, rather than have arbitrary barriers erected in their path. Care must be taken to balance oversight and assessment with academic freedom across all delivery modes.

Other Issues

Classroom Meeting Patterns for Hybrid Courses

Although implicit in the new course scheduling policy,¹⁸ the taskforce endorses the effort to help facilitate hybrid teaching through the use of 'room sharing', where one class would use a physical space on some days of the week and another class would use the same space on other days of the same meeting pattern. It may be worthwhile to prioritize the "split" Friday/Monday pattern as ideal for hybrid courses, as it alleviates the concern of having students meet for the same course at different times.

Teaching Assistants

The need for TA training was mentioned earlier in a footnote. To the extent that online classes lead to larger course enrollments, additional TAs will be needed to maintain quality standards and achieve a sufficient level of engagement. Some instructors and programs are convinced that online discussion sections need to be limited to fewer students than do face-to-face discussions. If so, then more TAs per

¹⁸ <https://provost.ucr.edu/searches/private/Course%20Scheduling%20Policy%20Workgroup%20Report.pdf>

student will be required. Although funding will follow the enrollments in our budget model, the colleges/schools may need some up-front financial assistance. TAs also need to be appropriately resourced for supporting online classes (e.g. internet connection, technology, etc.).

Messaging

Good communication is essential to successful change management, and shifting to more online courses will be no different. The central campus must communicate effectively with faculty about incentives, training requirements, technical support, deadlines, outcomes, and more. Effective messaging to students about the growing availability of online courses also is needed. This is especially true for summer offerings that could help both incoming students (e.g. transfer students admitted by exception, or new students planning to take high DFW courses in their first term) and current students (e.g. those living at home during the summer) graduate sooner and at lower cost. Furthermore, students need to be made aware at the time of registration that they may be enrolling in a course with significant online delivery, so that they are prepared for such a course. At present, messaging via Banner is minimally informative about courses with partial online content unless a course is completely online.

Course Fees

Some of the campuses we spoke with have online course fees that help to fund their central campus operations. OSU charges \$50 per online credit-hour and PSU charges \$35. Some may argue that such fees are justified because online delivery entails costs that face-to-face delivery does not (e.g. technology), but this is also true vice versa (e.g. classroom space). The taskforce prefers that UCR absorb differential teaching costs across modalities and resist instituting such blanket fees, as they seem inconsistent with our goal of increasing access. However, costs directly related to the essential functioning of the course can be included as Course Materials and Services Fees. This may include costs for examinations, discussed below.

Examinations

Fully online courses are not assigned any physical space on campus. If the instructor in such a course prefers a face-to-face exam, or a proctored online exam, or a synchronous online exam, problems can arise. Face-to-face exams require space but fully online courses are not assigned classrooms. Proctored online exams usually entail additional costs. Taskforce members are aware of, and sympathetic to, recent student pushback to exam fees in UCR online courses. Synchronous online exams are prone to scheduling conflicts. Under our current scheduling policy, final exam times are not assigned to courses that are not assigned physical campus space. Asynchronous online exams taken at a supervised UCR computer lab offer several benefits, but such space is currently limited on campus.

The taskforce has more questions than answers for the issue of examinations, but it is imperative that the campus provide a robust testing/finals experience for students in online courses. The taskforce recommends that the newly constituted Course Scheduling Committee, which has final exam scheduling under its purview, take up this issue. Regarding exam fees specifically, and assuming the campus achieves 8,500 virtual seats in online courses each quarter, campus-wide online proctoring costs could amount to \$550,000 annually (at the current ProctorU rate of \$21.50 for a 2 hour exam). Because we see benefits for both students and the campus from online instruction, the taskforce recommends sharing this cost. Appealing to the Student Technology Fee Advisory Committee to help offset examination costs is an option worth exploring.

Appendix A
UCR Information Technology Solutions
Support for Development of 50 Online/Hybrid Courses
Annual Academic Engagement Resources
August 2018

The document herein attempts to outline the current Academic Engagement resources as well as articulate the resource needs to produce 50 general assignment courses in a hybrid/online format. It is important to note that the focus of this document is on the resources required to actually produce the course materials, in consultation with the instructor – not support the underlying technology infrastructure. A direct relationship with Information Technology Solutions (ITS) is required to support the underlying technology infrastructure.

Current Academic Support Team

The ITS Academic Engagement Team is transforming real-world, “brick and mortar” courses into stimulating online learning experiences with tailored faculty training, grounded in creative workshops (labs, studios, panels, presentations), emerging technology pilots, and individual consulting. The current team is working on 54 ILTI funded courses. The current team consists of the following personnel:

- Team: 1 Associate Director, 2 Principal Instructional Designers, 2 Instructional Designers, 2 Media Producers with the following credentials:
 - 2 PhDs: Instructional Systems Technology; Higher Ed. Online Teaching & Learning
 - 1 ABD: Education, Specialization in Organizational Improvement Leadership
 - 2 Masters: M.Ed. Instructional Technology; M.S. STEM Education/Instructional Technology
 - 1 Visual Content Developer and Brand Strategist
 - 1 Documentary Producer, Co-Emmy nominee
 - Student Assistants: graduates/undergraduate students (from pre-med, digital humanities, data analytics, business)

- Experience: The team has approximately 140 years of combined experience working in varying higher education contexts.

- Instructional design excellence: Recipient of the 2017 Online Learning Consortium Award, 2018 Organization Excellence Showcase, 54 online/hybrid courses, testimonials, demonstrated growth in attendance at workshops and events.

50 Courses per Year: What resources are needed?

With a robust workshop program, an expanded instructional design team, and a few digital tools for supporting new course design, UCR can support the redesign of 50 courses annually, online or hybrid. The staffing requirements at a high level are:

- **1 Associate Director:** Leadership and management of personnel; vision and priorities; financial oversight.
- **1 Portfolio Manager:** Program planning; overall monitoring of program milestones and timeline, budget and resources; risk mitigation; assist in planning for program sustainability; project reports/updates to stakeholders.
- **1 Evaluation Specialist:** Campus and program level needs assessment and evaluation reports; research and data analysis.
- **1 Financial/Administrative Analyst:** Invoicing process, departmental liaison, accounts reconciliation, and fiscal reporting.
- **2 Principal Instructional Designers:** Needs assessment; overall program/portfolio management; departmental communication; resource planning; training coordination; overall monitoring of project timeline, budget and resources; reporting to stakeholders; plan for program sustainability; ensure appropriate branding of materials; project launch/close, in addition to the description of the Instructional Designer below.
- **6 Instructional Designers:** Overall course design (template, LMS content format, interactive media design); risk mitigation (compliance, ADA, copyright); coordinate project workflow and multimedia assets with media specialist; course evaluations/student feedback; assist lead instructional designer in continued consultations with faculty; project reports/updates to lead ID and PI.
- **1 Principal Media Producer:** Design, develop and maintain UCR brand strategy across instructional media. Translate complex instructional concepts into digital, 3D/VR, mockups and prototypes that lead to effective learner experiences. The Principal Media Producer would make the largest impact for science courses needing to digitize demonstrations and simulations of natural processes such as cell structure and physics experiments.
- **3 Media Producers:** Create, build and test engaging digital learning objects based on course design template (e.g. interactive case studies, video); support faculty with media production needs (e.g., Learning Glass, screen capture, recorded lectures).
- **6 Student Assistants:** Mentored by the IDs, these undergraduate/graduate interns will fortify and augment the core team. Student hires assist with detail-oriented multimedia tasks (e.g., curation of images, copyright clearance, video and audio transcriptions, LMS content). Graduate Students are familiar with subject-matter and work closely with faculty in developing digital content.

Tools

With additional courses and digital content, UCR will need to grow video and digital file storage capacity as well as enhance the Learning Management System with a robust application and provide the ability to manage course templates with a common approach for easy consumption of course content.

Core Tools

- **Camtasia Screen Recorder:** Screen capture and editing will provide recording capabilities for faculty working on short captures from their office.
- **Video Captioning Services:** ADA accessibility requires online videos have proper transcription for closed caption.

Additional Tools

- **Portfolio/Project Management (Existing ServiceNow):** With the increasing number of courses, a cloud-based enterprise work management tool is vital to monitor manage project process and milestones, time tracking, and issue tracking.
- **LMS and Templates:** Currently iLearn serves as a broad templated course development environment; our experienced team members are able to meet the needs of individual instructors. In the future Cidilabs software with Canvas would offer additional instructional design tools including course templates.
- **Common Digital Tools:** All courses will require some common tools and elements provided through the Learning Management System (LMS) including slides, readings, video recordings (incl. Learning Glass), Open Education Resources and other associated content; assignment upload tools; Zoom for office hours; social media tools; syllabus, instructor contact, calendar, announcements, email, FAQ forums, note-taking, Help tips.
- **Discipline-Based Templates:**
 - *Humanities & Arts:* the discursive, creative and interpretative disciplines will require a template for instructors that encourages student expression, discussion, and creative production of new ideas. Template elements may include discussion forums, chat rooms, presentation tools, blogging, journaling and annotation tools.
 - *STEM courses* organize teaching around the lecture-based examination of factual, empirical knowledge in the scientific world. Students must memorize and apply learned concepts to new contexts and problems. Science instructors will need a course design template that will permit polling, electronic grading (quizzes, proctored exams), specialized software such as LaTeX, and coding apps.
 - *Social Sciences courses* are distinguished by empirical, systematic, patterned approaches to knowledge of the social world. Social Science instructors will need a course design template that offers support for such distinction.

Associated Costs

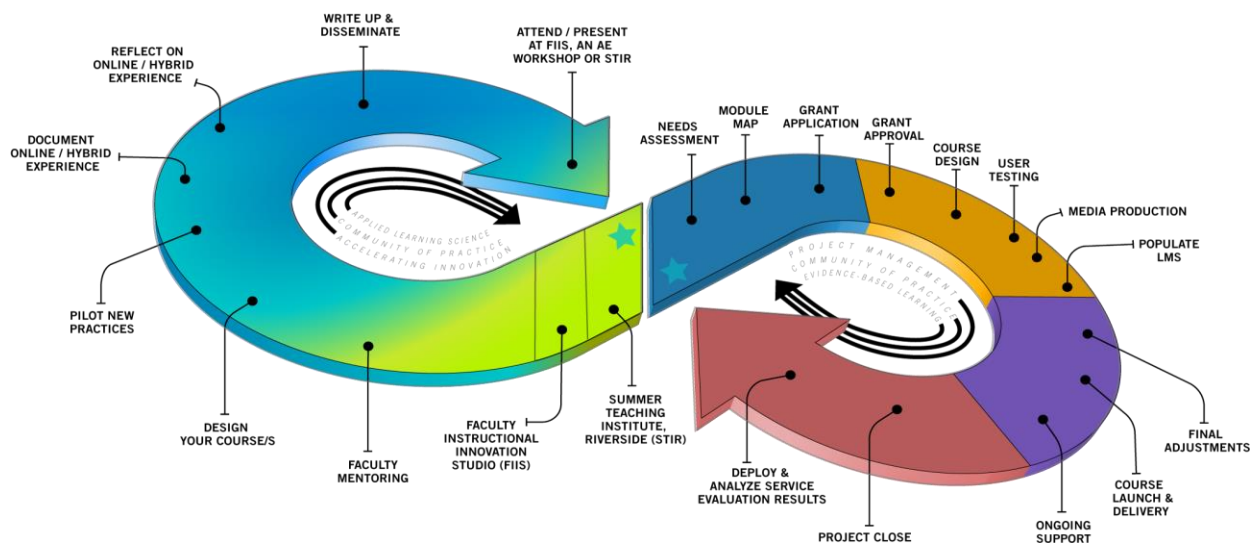
The following table lists current staff supporting online learning at UCR. The table also details augmentations needed to complete a team in support of 50 new courses annually for online and hybrid.¹⁹ In addition, the table below includes costs for core software and captioning needed in developing online course content.

	Position	Approximate Salary Level	Approximate Salary + Benefits + Support
Current Permanent	Associate Director for Academic Engagement	105,000.00	174,300.00
	Instructional Designer	80,000.00	132,800.00
	Instructional Designer	80,000.00	132,800.00
	Instructional Designer	80,000.00	132,800.00
	Undergraduate Student Assistants (4)		41,000.00
Current Contract	Principal Instructional Designer	95,000.00	157,700.00
	Principal Instructional Designer	95,000.00	157,700.00
	Principal Media Producer	95,000.00	157,700.00
	Media Producer	65,000.00	107,900.00
Augmentation	Portfolio Manager	90,000.00	149,400.00
	Evaluation Specialist	90,000.00	149,400.00
	Financial/Administrative Analyst	75,000.00	124,500.00
	Instructional Designer (3)	75,000.00	373,500.00
	Media Producer (2)	65,000.00	215,800.00
	Graduate Student Assistants (2)	GSR salary plus \$15/hr for summer	99,000.00
		Augmentation + Contract Total Costs	\$2,306,300.00
Core Tools		50 courses/faculty	
	Captioning		67,500.00
	Camtasia Desktop Video Capture		9,000.00
			76,500.00
			\$2,382,800.00

¹⁹ The taskforce added approximate costs for current permanent staff and updated the totals that were provided originally by ITS.

The Course Design Process and Community of Practice

In 2018, the Academic Engagement team developed and instituted an original instructional design process, represented by the right side loop in Figure 1. The Course Design process draws on and generates best practices in instruction at UCR. A campus community of practice is strengthening around scholarly activities such as mentoring, piloting new technologies, and sharing and showcasing of best practices at central connecting events such as the 5-week, interactive [Faculty Instructional Innovation Studio \(FIIS\)](#), and the newly minted [Summer Teaching Institute - Riverside \(STIR\)](#) institute. The UCR community of (instructional) practice, shown on the left side of Figure 1, is an integral and inseparable part of the instructional design process.



Process for Success

Fig 1. Supporting Faculty with Innovative, Research-based Course Development

- polling, surveys, quizzes, presentation tools, note-taking, journaling.

Value and Outcomes

With leadership endorsement and faculty commitment, UCR can expand the current instructional design process into a robust online program with the capacity to develop 50 online/hybrid courses per year that will meet the campus 2020 goals of *Excellence, Access, Diversity, and Engagement*. Indeed, the Academic Engagement team has the experience and creativity to foster the design and production of courses that will increase:

- student engagement;
- student academic performance;
- student satisfaction as expressed in student evaluations of courses and instruction;
- the number of grant applications submitted for funding to develop hybrid and online courses;

- the number of grants awarded to fund hybrid and online course development, and technology-infused course improvements;
- improved teaching performance by faculty and LSOEs, based on performance appraisals and tenure reviews;
- recognition of quality online course offerings.

Varying Course Demands

Fully online courses:

Consultation advice from skilled instructional designers is essential to ensure that instructors create, arrange and sequence learning assets (videos, exercises and activities) such that:

- a. students always know what to do next, and
- b. student learning is sequenced in ways that will challenge but also scaffold learners towards developing critical thinking skills and achieving learning outcomes.

Online courses typically require more support than hybrid courses in the creation and editing of videos and multimedia assets.

Hybrid courses:

Hybrid and "flipped" course models retain some face-to-face component: the regular schedule of lectures, reduced class contact or simply office hours. Thus, hybrid/blended courses tend to have a reduced need for tools and digital content. However, these classes do require careful instructional design advice to ensure proper sequencing and integration of the face-to-face and online learning experience.

Humanities vs Sciences/STEM courses:

Regarding differences in design and production costs for Humanities vs STEM courses: there is no clear and simple answer. The attached document, [Cost to Institutions of STEM Degrees](#), suggests that both Visual and Performing Arts, and Liberal Arts, General Studies and Humanities rank highly and compete with STEM courses in terms of cost. In our experience, this would hold true for online and hybrid course development. Complexity of design and production really depend on the nature of the course and the values and vision of the instructor, and less so on the disciplinary context.

References

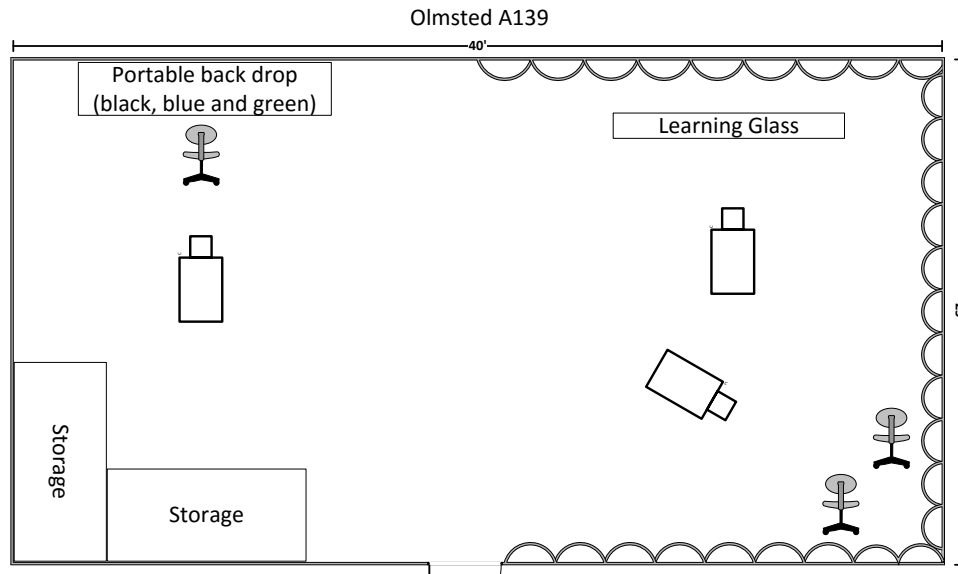
- [UCOP ILTI: What Does an Instructional Designer Do?](#)
- [2017 Educause ELI: Key Issues in Teaching & Learning](#)
- UC White Papers:
 - [UCI Hybrid Learning: Initial Survey of Needs](#)
 - [UCI Hybrid Learning: Models & Examples](#)

ITS Multimedia Studios

The Multimedia and Classroom Technologies division within ITS support and maintain three recording studios. The facilities are designed and outfitted to support the creation of video segments for both online and hybrid courses. There are a compliment of cameras, microphones, lighting and basic backdrops that can be used.

OLMSTED A139:

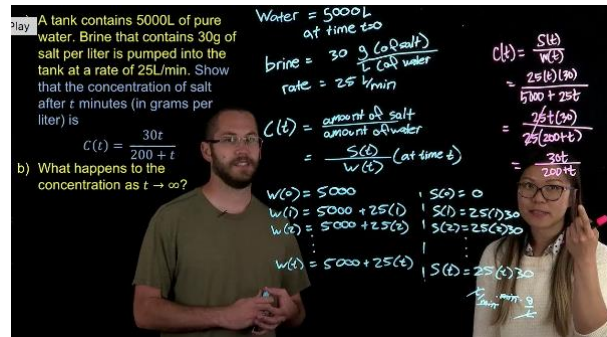
ASF 753. The A139 studio is divided into 3 main recording areas: 2 small “stand-up” sets that can accommodate 2 people and 1 “Learning Glass” set. The Learning Glass set is a “turn-key” set and used primarily to create videos where instructor can face the viewers while writing on an invisible white-board, but can also support superimposed images. The stand-up sets are flexible and can be configured with portable lighting and changeable backdrops to accommodate stand-up monologues, interviews and chroma key superimposition effects. The studio is acoustically neutral and can also accommodate voice-over recordings.



Olmsted A139 Layout



Learning Glass Studio (A139)



Still from Math Module shot with the LG



Corner Stand-Up Space

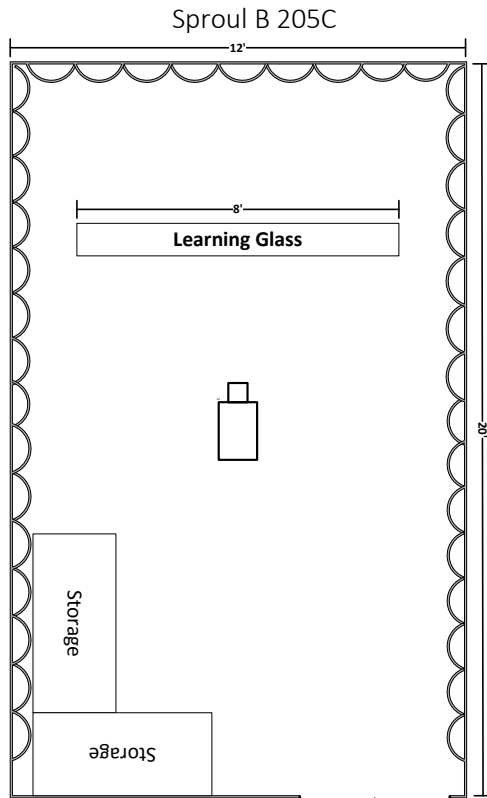
Flat Stand-Up Space



Before-and-After from "green screen" session in Flat Stand-Up Area

SPROUL STUDIO B:

ASF 375. This is a smaller studio space. While the learning glass is larger, it is on wheels and can be moved out of the way when needed allowing the full space for promotional photography and videography. The black studio curtains are on tracks and can be moved, revealing a cyclorama; additional backdrops can be hung to suit the client's needs. The portable camera and lighting equipment from A139 can be used to support shoots in studio B.



Studio B Layout



Studio B without Learning Glass Set-up

SPROUL 2208:

Sproul 2208 is split into a desktop studio and a sound isolation studio. This studio is designed as a self-service station to allow instructors to narrate “on-screen” presentations and produce full lectures or individual learning modules. This space will be fully outfitted for Fall 2018.



Sproul 2208 Sound Isolation Booth in construction.

Comparing Support for Online/Hybrid Courses:

Both course delivery modes require careful planning.

Enrollment Numbers: a Key Variable in Assessing Costs:

The other factor to be considered in estimating costs is eventual enrollment numbers. A new online course could be considered expensive to produce if eventual enrollments hover at 20-50 students per iteration, compared with an online course that attracts 250-300 students.

Long-term Online Course Maintenance: Another Variable in Assessing Costs:

[Keeping Online Courses Fresh: Valuable, but Costly](#). (Lieberman, M. Inside Higher Ed. July 18, 2018). "The cost of maintaining an online course for several years can eventually outstrip the launch cost -- but the investment might just pay off."

Online & Hybrid Course Quality: Interaction and "Presence" (Instructor, Student and Cognitive) are Essential for Student Engagement:

Beyond disciplinary differences, what is more important in online and hybrid course design and the student learning experience is that all instructors receive adequate consultation and advice from an instructional designer on how to build into their online course tools and strategies that will foster interaction and generate instructor, student and cognitive "presence" ([Garrison, Anderson & Archer, 2010](#); Garrison & Vaughn, 2009). These "humanizing" elements (Kilgore, 2018) are recommended in the research literature and press as essential for student learning success. These engagement factors are just as important in online STEM courses as they are in online Humanities and Social Sciences course.

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