

Open CU: Building a Sustainable OER Initiative Across the University of Colorado

The University of Colorado System proposes a multi-campus OER initiative that leverages existing infrastructure, expertise, advocacy, and leadership support to quickly scale **OER awareness, evaluation, and adoption** across the campuses' combined 66,000 degree-seeking students and 9,000 faculty and instructors. Open CU will have a positive impact on thousands of students in financial savings and will increase the quality of student learning experiences. We estimate that as a result of this initiative, at least 5,400 students will take a course taught by a participating educator.¹ CU requests \$98,200 to support this work and pledges significant in-kind staff resources, additional internal funding, and a waiving of indirect costs for the grant.²

Research demonstrates that the use of OER is correlated with student persistence in coursework, reduced time to degree, and increased access to higher education opportunities by low income and minority students. Furthermore, educators who utilize OER report that their students are more engaged with these materials in comparison to traditional textbooks. Open CU reflects these research findings in its goal to reduce textbook costs and improve course design broadly. This proposal represents the University of Colorado's commitment to reducing barriers to OER adoption across our campuses by demonstrating institutional support; providing learning and educational opportunities to educators to enhance OER skill and knowledge; sharing expertise and tools for successful identification, evaluation and adoption of OER; and offering incentives for educator time and effort.

Rationale: Open CU Models Openness and Addresses Equity Goals

Open CU is based on a premise of openness and collective impact across CU's four campuses and beyond. Each campus OER Council or Team brings expertise and resources to the shared table. Shared or jointly created implementation resources and methods to scale awareness and adoption are customized to meet specific campus needs, cultures, and student and educator communities. All practices and resources developed and piloted in this initiative—including materials for awareness-raising—will be available and openly licensed for adaptation and reuse by all Colorado colleges and universities, as well as educational entities worldwide.

CU is proud to serve students from across Colorado, including urban and rural populations and non-traditional and underrepresented students. The University's reach and reputation allow Open CU to garner media coverage that can increase the public profile of and support for OER initiatives across Colorado's higher education institutions.

One recent study showed that use of OER improves grades and decreases DFW (D, F, and Withdrawal) rates for all students, but at greater rates for Pell recipients, part-time students, and historically underserved groups.³ Together, CU's four campuses serve over 12,000 Pell Grant recipients, representing nearly 20% of the student body overall and 15% of all Pell Grant recipients in the state of

¹ We conservatively estimate engagement by 120 educator participants who teach 1-2 courses with an average of 30 students per course. Because we are targeting high enrollment and core courses, the actual number of students impacted will likely be much higher. Since campuses have different nomenclature for faculty, instructors, and graduate student instructors, we refer to them collectively in this proposal as "educators."

² Indirect cost rates range between 42 and 49%; waiving these costs represents approximately \$30,000 in-kind funding.

³ Colvard, N., Watson, C., Park, H. (2018) The impact of open educational resources on various student success metrics. *International Journal of Teaching and Learning in Higher Education*, v30 n2 p262-276.

Colorado.⁴ As a result, a robust, multi-campus OER initiative will have an outsized, positive impact on equity across the state.

CU Is Primed For Collaborative Work to Advance OER Awareness and Adoption

CU's campuses already have a year's experience working collaboratively to increase OER awareness and adoption. The CU/Auraria OER Steering Team spans all four campuses and is designed to share information, workloads, expertise, and resources relevant to open educational practices. The team also works with extensive campus networks to advocate for and support the design and adoption of OER in CU courses. The group has actively increased awareness and connected campuses through the 2018 OER Collaborative Summit as well as at regional conferences such as COLTT and the 2018 Greater Western Library Alliance/Colorado Alliance of Research Libraries' "OER: From Vision to Action" conference.

Individually, CU's campuses have exceptional expertise in and commitment to OER. **Working together toward a common goal, we have unprecedented momentum and reach.** Open CU capitalizes on the individual strengths and contributions of CU campuses to collectively:

- Target "high priority" courses, those with high enrollment, high textbook costs, core courses, courses with high DFW rates, and those courses with higher-than-average percentages of students from historically underserved populations and/or first generation students.
- Create campus teams with representatives from faculty development and teaching and learning centers, libraries, offices of information technology, and accessibility units. These teams support educators' evaluation and adoption of OER and increase efficiencies by sharing knowledge, practices, and resources across and between campuses.
- Provide the networks and opportunities for educators to share results of OER evaluations, pilots, and resources discovered with disciplinary colleagues not only on their home campus, but on other campuses as well. This practice increases the number of courses and sections using OER and advances a sustainable foundation for Open CU.

Approach: Focusing on Educators Means CU Will Lower Barriers to OER Adoption

CU recognizes the promise of OER to ameliorate high educational costs for students and decrease equity gaps. However, the energy, time, and intellectual work required to select, customize, remix, or create open materials may act as a deterrent to necessary educator engagement with OER. A recent survey from the Babson Survey Research group identify a few barriers to OER use: difficulty in locating OER, lack of resources, concern about updates and licensing, lack of quality, lack of print options, lack of currency, or OER not used by other faculty.⁵ Open CU addresses barriers, real and perceived, and thereby reduces financial obstacles to student learning and success by focusing on and supporting educators through awareness, adoption, and course redesign efforts on all campuses. Open CU:

- **Builds awareness of OER**, including their availability and benefits, in part by using shared communication and messaging templates and practices customized for each campus.
- Engages educators in systematic **evaluation and review of OER**. Modest incentives and extensive support allow at least 120 CU educators to attend OER workshops and participate in communities of practice and/or learning circles. Educators will share their evaluations broadly, including with state and national colleagues in their disciplines or fields of study.

⁴ https://higherred.colorado.gov/Publications/Reports/FinancialAid/FY2017/201617_FAReport_rel02132018.pdf shows 84,032 Pell Grant recipients in Colorado in 2017. <https://www.cu.edu/employee-services/student-financial-aid> shows 12,702 Pell Grant recipients at CU in 2017.

⁵ Opening the Textbook: Educational Resources in U.S. Higher Education, 2017, Babson Survey Research Group <https://www.onlinelearningsurvey.com/reports/openingthetextbook2017.pdf>.



- Provides modest incentives and supports at least 40 CU educators to **adopt OER**, engage in course redesign processes, and evaluate the effectiveness of their OER pilots. Educators will share evaluations of their OER pilots broadly, including with state and national colleagues in their disciplines or fields of study.

The initiative's logic model (Figure 1) shows necessary inputs, planned outputs, and desired outcomes of Open CU.

Open CU: Building a Sustainable OER Initiative Across the University of Colorado

The University of Colorado proposes a multi-campus OER initiative that leverages existing infrastructure, expertise, advocacy, and leadership support to quickly scale OER awareness and adoption across the campuses' combined 66,000 students and 9,000 faculty. This initiative will have a positive impact on thousands of students both in financial savings as well as increased quality of learning.

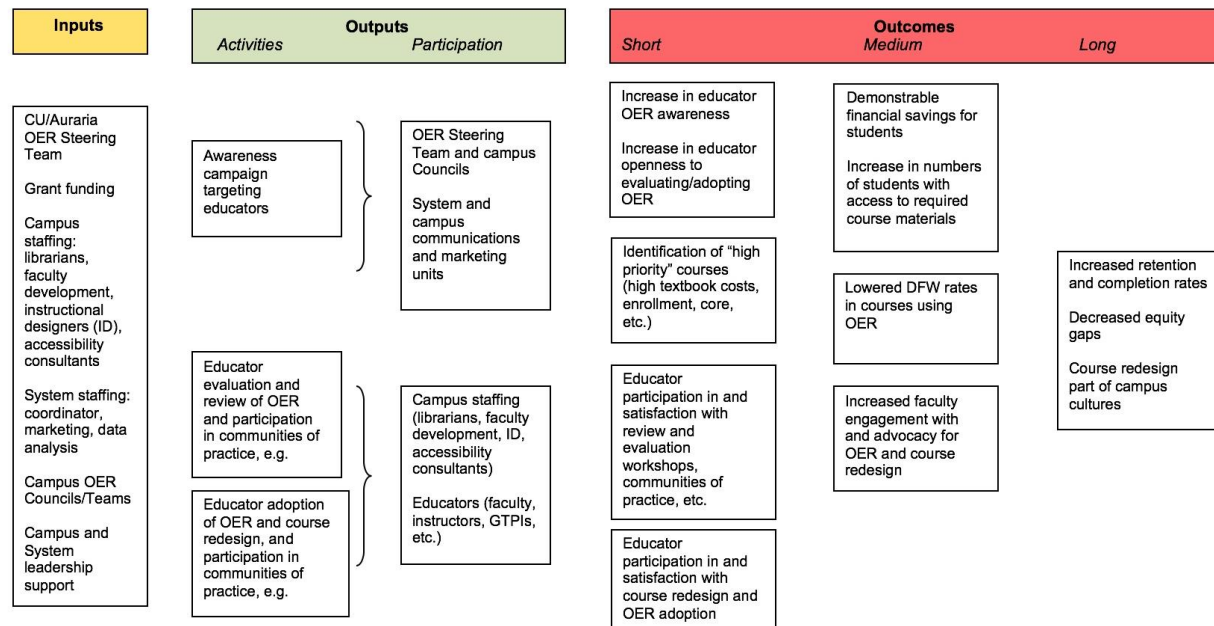


Figure 1: Logic Model for Open CU

Shared Processes Create Opportunities for Learning and Efficiencies

CU's four campuses will use shared processes and activities customized for campus needs. An activities timeline is presented in Figure 2; see Figure 3 for evaluation activities, which run concurrently.

Open CU: Building a Sustainable OER Initiative Across the University of Colorado Shared Activities Timeline	
Month	Activity
February 2019	Design and launch awareness campaign; outreach to students for assistance with awareness campaign; identification of "high-priority" courses on each campus; educator applications for reviewing and evaluating OER; development of review and evaluation workshops and support models; monthly steering team meetings (began summer 2018)
March 2019	Monthly awareness blasts begin; online OER information and resource sites (e.g., Lib Guides and other sites on each campus) developed; 30 educators per campus participate in review and evaluation workshops; hosting/discoverability solutions explored
April-May 2019	Educator evaluations posted; educators apply to participate in OER implementation and course redesign; development of OER implementation and course redesign workshops and support models; hosting/discoverability solutions implemented

June 2019	10 educator per campus participate in implementation and course redesign workshops and begin preparing courses for launch; all-CU OER recognition and networking event; CU/Auraria OER Steering Team considers next steps and continued funding for Open CU
July 2019	Report to CDHE
August 2019	Educators' redesigned courses with embedded OER launch for fall semester
January 2020	Educators' redesigned courses with embedded OER launch for spring semester
May 2020	Educator evaluation of pilots due; all-CU OER recognition and networking event; steering team determines next steps for sustaining Open CU; educator and support OER badges issued; final report submitted to CDHE

Figure 2: Shared Activities Timeline for Open CU

Campus Differences Bring Richness and Efficiencies to Open CU

The overarching benefit of a multi-campus OER initiative is the ability for campus educators and staff to learn from one another and to share the work involved with creation of resources and content for educators. While they share commonalities in outcomes and basic structure, each campus slightly customizes practices and communications according to local needs and cultures.

The facilitators at each campus will work with and have already reached key campus partners, such as: Offices of Information Technology, instructional designers and academic technology consultants, faculty resource centers, teaching and learning centers, libraries, and bookstores. Additionally, several of the campuses will work alongside the members of campus OER councils (Anschutz) and OER advisory committees (Boulder and Denver) to build awareness and provide stipends to educators for review, evaluation, adoption, and adaptation of OER. Generally, each campus will offer workshops, trainings, and discussions designed to increase awareness of open educational practices and principles. These learning opportunities may take the form of communities of practice or cohorts as participants explore strategies for locating, reviewing, and adapting open educational resources. The outputs of this work, whether OER reviews, capstone projects, or OER champion profiles will serve to highlight accomplishments as well as modelling possibilities for wider campus contributions. Central to the initiative's goals is an effort to expose this work to a broad audience; therefore, campuses will host content in institutional repositories, online guides, and other publications.

Campuses will collaborate to share recruitment strategies, models for cohort organization, data gathering methodologies, awareness campaign resources, and training materials. Additionally, Open CU allows campuses to share knowledge of copyright, licensing, open pedagogies, and accessibility through monthly meetings and digital communication channels.

All four campuses will target key courses and populations (for example: first generation college students, working adults without a college diploma, rural and minority students) to increase retention and graduation rates by reducing costs and to address issues of equity.

The Office of Digital Education and Engagement at the CU System, which convenes and supports the CU/Auraria OER Steering Team, will provide dedicated staff to support campuses with data analysis, the creation of marketing collateral, implementation of multi-campus and Colorado-wide communications about Open CU and OER in general, evaluation of the initiative, progress reporting for the grant, and participant badging design, certification, and issuing. In addition, the CU System is contributing additional

funding—\$14,000 from the President’s Office and \$10,000 from the Office of Digital Education and Engagement—for educator stipends and for staffing and recognition respectively.

Campus-specific infrastructure, approaches, resources, and foci are detailed here and in Appendices D and E.

The Anschutz Medical Campus has an existing OER Council, as well as a dedicated librarian to coordinate and support OER efforts on the campus. The Health Sciences Library has long provided expertise on OER and copyright. Its institutional repository, which is freely accessible, can host resources, including educator OER evaluations. The campus’ standing instructional design round table, with representation from most of the schools, including dentistry, pharmacy, public health, nursing, and family medicine, has a strong interest in OER and can serve as a clearinghouse for OER trainings and resources. The new Office of Digital Education provides additional support for the adoption and creation of digital OER materials. The campus will develop OER training and resources materials, identify educators currently engaged with OER, and identify potential early adopters to participate in Open CU via schools’ instructional designers. The Office of Digital Education also heads a two-campus (Denver and Anschutz) initiative to increase access to higher education by specific Colorado populations that face disparities in academic achievement, including first generation college students, working adults without a college diploma, rural and minority students. The campus will increase adoption of OER by focusing on fully online degree programs and is committed to enhancing as many of these programs as possible with OER. The campus will mobilize instructional design and peer mentoring resources; they will be aligned with the Center for Faculty Development offerings to support OER development, adaptation, and adoption, and to sustain adoption over time as courses are updated and revised.

The Boulder campus has a recently formed OER advisory committee charged by the Provost to make recommendations for future campus activities in support of OER. Additionally, the University Libraries have three librarians, the OER Leads, actively working on the promotion of OER and the support of early adopters on Boulder campus. In addition to increasing awareness and adoption of OER, the campus plans to strengthen awareness of open pedagogies and encourage a teaching culture that explores new pedagogical models for learning.⁶ Campus OER leads have chosen the Open Textbook Network’s [rubric](#) for faculty and other subject matter experts to use as they review and report on OER quality and applicability for adoption. Those same leads will work with support staff from the Office of Information Technology, the Arts & Sciences Support of Education through Technology, the Department of Accessible Technology, and others to design and offer OER related workshops and to select educators to participate in a course redesign project that integrates OER and/or open pedagogical practices into existing courses. CU Boulder commits the time and resources of the OER Leads to Open CU and will seek campus funding as its OER Advisory Committee makes it available. The outcomes of the initiative will be highlighted on the Libraries OER initiative guide. Profiles of educators participating in the program will include a description of the project, materials, and courses impacted (the Open Education Champions program). Reviews of Open Educational Resources will be made available on the guide. Materials and resources used to facilitate workshops and learning opportunities will be curated and published with Creative Commons licensing.

The Colorado Springs campus has identified OER supporters as the first step toward establishing an OER Council. Like the other campuses, UCCS will be building awareness and providing stipends to educators for the review, evaluation, adoption, and adaptation of OER. Dedicated campus partners include the Library, Bookstore, the Office of Online and Academic Outreach, the Office of Information

⁶ See Appendix E for a full description of Boulder’s Open Education Program

Technology, and the Faculty Resource Center. UCCS will work with and learn from CU colleagues on the other campuses as it develops evaluation rubrics, workshops and web-based trainings to galvanize its existing OER expertise and work. The campus will place a special emphasis on reaching out to educators teaching in the Compass Curriculum (UCCS' general education curriculum) and to those developing online high school concurrent enrollment courses for participation in Open CU. OER supporters have already secured agreement from the UCCS Bookstore to delineate OER as the only option, or the first option, in courses where there are options for textbook acquisition.

The CU Denver campus' Jump Start OER Program⁷ will enroll 30 educators who teach CU Denver core courses, which are generally high enrollment, in the OER Mastery Path. The Mastery Path will be a suite of OER professional development, trainings, workshops, and discussion opportunities designed to build educators awareness and skills for locating and critically evaluating OER. The educators members will complete each of the seven Path milestones (see Appendix D) and will produce a capstone project by formally reviewing OER content. In the second, or adoption phase of the Program, the OER Community of Practice (CoP) will support 10 educators who teach core courses in adopting and integrating OER into a course. CU Denver campus educators are building a tradition of participation in Communities of Practice where they tackle teaching and learning problems with a sense of autonomy, mastery, and purpose. The OER CoP group will work together to ask and answer key questions around the pedagogical and design implications of adopting and integrating OER into their courses. The Faculty Learning Development Center will create and facilitate the OER Mastery Paths. Educators investigating and integrating OER for teaching can expect support from instructional design, technology, and accessibility specialists, and peers. The Auraria Library will partner and support these efforts through complementary workshops and individual consultations, awareness events and efforts, online OER educational and promotional materials, facilitation of cross campus OER and open education communication, formal educator recognition initiatives, additional OER funding programs, a repository for created-OER, and responsive collaboration. The use of OER has the potential to articulate with several large-scale, campus-wide CU Denver student success initiatives. These include the development of \$15,000 degrees, promotion of inclusive pedagogy, and targeted strategic priorities to improve retention and graduation rates. With the most diverse student body in the CU System, the adoption of OER resources on the CU Denver campus is about saving students money, and importantly is also an equity issue.

Discoverability: It Don't Mean a Thing, If They Can't Find That Thing

To assist students in making course selection decisions and to address state legislation requiring that all public higher education institutions inform students of courses that use OER by 2021, campuses will require educators accepting stipends for integrating OER into their courses to alert students via course or departmental websites and/or to work with campus bookstores to denote their courses or sections as OER. Such a solution has already been agreed to on the UCCS campus. If an educator there chooses free or low cost course materials, the UCCS bookstore will help the students identify such courses and will list OER or low-cost course materials as textbook options. Central to Open CU goals is to expose educator OER work to a broad audience. Therefore, campuses will host OER content and evaluations in institutional repositories, online guides, and other publications, both on-campus and off. Additional communications targeting educators will ensure this content is readily available and useful to those not participating in initial activities.

⁷ See Appendix D for a full description of CU Denver's Jump Start OER Program.

Open CU Means Accessible to All

The focus of this phase of Open CU is awareness and adoption of OER. Campus facilitators have and will continue to consult with usability and accessibility designers on campus to ensure that materials chosen are accessible. Educator participants will learn best practices for accessibility in workshops and will submit content for review by accessibility and/or universal design experts before adoption. Facilitators will also include content into workshops and online learning spaces, promoting materials such as the [AIMS](#) and [University of British Columbia's OER Accessibility Toolkit](#). UCCS has committed an accessibility professional to assist with accessibility reviews of OER.

Sustainability: Open CU is Designed for the Long-Term

Members of the multi-campus OER steering team and campus partners are committed to continuing advocacy and educational initiatives beyond the lifespan of this grant cycle. Following analysis of success and barriers to achieving our goals, members will continue to seek internal and external funding supports for on-going open education development on our campuses. Members will continue OER consultation, online learning content, and in person learning opportunities, while also continuing to participate on the CU System OER steering team. In subsequent years, we anticipate that OER energy will increase and contribute to larger initiatives and degree programs. For example, CU Denver intends to offer full OER courses associated with the \$15,000 undergraduate degree that will begin matriculating students fall 2023, and will integrate OER topics into online teaching workshops. UCCS' OER best practices will be disseminated through its Faculty Resource Center and Online & Academic Outreach unit in its workshops and materials.

Evaluation Provides Feedback to Continually Improve and Sustain Open CU

Open CU is grounded in an extensive evaluation plan that incorporates existing data, new surveys of educators and students, and comparative analysis of textbook costs, enrollments, and DFW rates in courses adopting OER and their prior like-semester courses.

Open CU: Building a Sustainable OER Initiative Across the University of Colorado Evaluation Plan		
<i>Outcome</i>	<i>Measure/Method</i>	<i>Timing</i>
Increased educator Awareness	Baseline measures (all-educator awareness survey or existing campus data), with questions about advocacy behaviors, courses taught, textbook price awareness, current use of and openness to OER Follow-up baseline measures; same questions as well as awareness of and/or participation in Open CU	January 2019 January 2020
Identification of "high priority" courses	Lists of high enrollment courses and textbook costs by campus Analysis correlating textbook costs with high enrollment courses, high DFW, high representation of underserved populations, first generation students	Currently exist December 2018
Educator participation in evaluation and review	Counts: workshop participants, evaluation badges Survey of participants to gather information about courses taught, workshop evaluation, and advocacy behaviors	Spring 2019 Spring 2019

Educator participation in adoption of OER	<p>Counts: workshop participants, adoption badges</p> <p>Survey of participants to gather information about courses taught and workshop evaluation, where portfolios are posted, and advocacy behaviors; evaluation of educator portfolios</p> <p>Student satisfaction with OER</p>	<p>Summer 2019</p> <p>Summer 2019</p> <p>Fall 2019 & Spring 2020</p>
Financial Savings	<p>Prior like-semester textbook costs and numbers purchased</p> <p>Comparative analysis</p>	<p>September 2018 & January 2019</p> <p>September 2019 & January 2020</p>
Increase number of students with access	<p>Use awareness survey responses to estimate number of students benefiting from pre-Open CU Initiative adoption of OER</p> <p>Prior like-semester enrollments for courses taught by Open CU Initiative participants</p> <p>Comparative enrollment analysis for courses taught by Open CU Initiative participants</p> <p>Use second awareness survey responses to estimate number of students benefiting from adoption of OER in courses taught by educator not participating in Open CU</p>	<p>January 2019 & September 2018</p> <p>January 2019 & September 2019</p> <p>January 2020</p> <p>January 2020</p>
Decreased DFW rates	<p>Prior like-semester DFW rates for courses taught by Open CU Initiative participants</p> <p>Comparative DFW analysis for courses taught by Open CU Initiative participants</p>	<p>September 2018 & January 2019</p> <p>September 2019 & January 2020</p>

Figure 3: Evaluation Plan for Open CU

Open CU is Right for Students, and Right for the State of Colorado

With Open CU, the University of Colorado has a unique opportunity to leverage multi-campus expertise, infrastructure, and leadership and have a positive impact on a large proportion of Colorado's students and educators. Through collaborative effort and grant-funded activities, CU will be able to extend and scale OER awareness, evaluation, and adoption well beyond campus boundaries and the grant period.

Over a dozen initial collaborators who worked together on this proposal (see Appendix B for full list), are ready to realize the promise of OER to improve grades and decrease DFW rates for all students, and more so for Pell Grant recipients and students from historically underserved groups. Working together, CU's four campuses—serving 15% of Pell Grant recipients in the state—are poised to have a positive and prominent impact on equity across Colorado. CU campuses collectively are targeting courses with high enrollment, textbook costs, and DFW rates, as well as core curriculum courses, ensuring that Open CU evaluation and adoption efforts maximize financial savings and student success.

CU's campuses have exceptional OER expertise and nascent systemization of OER activity. Grant funding for Open CU will allow us to work together toward a common goal with unprecedented momentum and reach. Open CU capitalizes on the individual strengths and contributions of CU campuses, nurtures openness and sharing of solutions and resources, and, in this first phase alone, will impact at least 5400 students across the university. We look forward to securing the funding needed to build on the energy that was cultivated in the conceptualization of the Open CU initiative.

Appendix A

Budget and Budget Narrative

Description	Justification	Cost
Educator stipends	Incentives for educators to participate in evaluation and review phase of the initiative (30 educators per campus @\$250) and in adoption and course redesign phase of the initiative (10 educators per campus @\$1,000). Each campus receives \$17,500 for all stipends and will increase stipend amount or number as campus matching funds allow.	\$70,000
Workshop costs	Campus-based workshops (at least 2 per campus, or \$275 per workshop), with campus matching or facilities, food, staffing, video production and hosting, live streaming	\$2,200
Recognition Event	All-campus event for approximately 100 people to serve as program evaluation, celebration, and recognition	\$1,000
Accessibility consultant	Stipend for accessibility consultant	\$5,000
Instructional Designer	Instructional design support for course redesign and OER adoption (\$2,500 salary offset per campus)	\$10,000
Graduate student	For surveys, educator contact, evaluation, tracking (\$2,500 salary offset per campus)	\$10,000
TOTAL		\$98,200
IN-KIND FUNDING	CU President Bruce Benson has committed \$14,000 in additional funding to increase the number of educator participants; the CU System Office of Digital Education and Engagement pledges up to \$10,000 for recognition, multi-campus events, and other support for the initiative, including data analysis, marketing, and badging	\$24,000

Educator stipends: Each of CU's four campuses will receive \$17,500 to use for educator stipends for both the review and evaluation participants and the adoption and course redesign participants. While the campuses may increase the number of participants or stipend amounts, the minimum number of participants per campus for the review and evaluation phase is 30 educators and for the adoption and course redesign phase 10 educators. An additional \$14,000 funding from President Bruce Benson will allow campuses each to engage at least 6 other educators for review and evaluation and 2 for adoption and course redesign.

Workshops and recognition event: Both the review and evaluation and the adoption and course redesign phases of Open CU require educator participation in at least two workshops. Campuses are planning on several more workshops and gatherings to ensure sustained engagement and build community around OER and course redesign. The CU System Office of Digital Education and Engagement will contribute additional funding for a recognition event and badging.

Specialized Staffing: Funding provides the ability for campuses to supplement salaries and wages for staffing critical to the success of the initiative, including accessibility consultants, instructional designers, and graduate student assistants.

In-Kind Funding: CU President Bruce Benson has committed \$14,000 in additional funding to increase the number of educator participants; the CU System Office of Digital Education and Engagement pledges up to \$10,000 for recognition, multi-campus events, and other support for the initiative, including data analysis, marketing, and badging.

Appendix B

Open CU Collaborators

CU System

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Appendix C

Open CU Letters of Support (separate attachments)

System: President Bruce Benson

Anschutz Medical Campus: Provost Rod Nairn

Boulder: Provost Russ Moore

Colorado Springs: Chancellor Venkat Reddy, Provost Tom Christiansen

Denver: Chancellor Dorothy Horrell, Provost Rod Nairn

Appendix D

Description of Denver's OER Jump Start Program

Funding for Open CU Grant offers the opportunity to jump start awareness and use of Open Educational Resources (OER) on the CU Denver Campus, where there has been little systematic discussion or promotion of the uses of OER. We will use these funds to begin the conversation and develop a cohort of educator advocates who, along with administrative support, will help to move the use and development of OER forward on our campus.

Phase 1 of our project focuses on **building awareness** of OER resources. We will engage 30 educators who teach CU Denver Core Courses as they complete an OER Mastery Path, a structured professional

development sequence in which they will **identify**, **evaluate**, and formally **review** OER resources in their field, discipline or subject area. In Phase 2 of our project, which focuses on **adoption** of OER, 10 educators who teach CU Denver Core Courses will participate in a structured and guided Community of Practice that will provide them with both expert and peer support as they implement OER into the design of a course. By focusing on educators who teach core curriculum courses (which tend to have higher enrollment) we hope to have an impact on a large number of students who are in an early, vulnerable period of their academic career.

On the CU Denver downtown campus the use of OER has the potential to articulate with several large-scale, campus-wide student success initiatives like the development of \$15,000 degrees, promotion of inclusive pedagogy, and targeted strategic priorities to improve retention and graduation rates. Recent research has demonstrated that OER has a benefit for all students, with a disproportionately positive benefit for first-generation students, Pell eligible students, and student from historically underrepresented groups.⁸ CU Denver has the most diverse student body in the CU System, so for us the adoption of OER resources is not only about saving students money; it is also an equity issue.

OER Jump Start Program Goals:

- Remove financial barriers to student learning and student success by promoting OER resources.
- **Build awareness** of OER resources specifically among educators who teach CU Denver core courses.
- Enable educators to systematically **evaluate** and **review** OER resources for their Core Courses.
- Support educators efforts to reimagine and redesign their courses as they **adopt** and embed OER resources.
- Promote the use of evidence-based **OER enabled pedagogies**.

OER Jump Start Program Outcomes:

- Students enrolled in courses with educators members that have adopted OER as part of this project will save significantly on educational materials costs.
- Educators participants will be able to explain the benefits of using and/or developing OER.
- Educators participants will be able to use efficient strategies to identify and effectively use key digital libraries, search engines and repositories to search for OER in their discipline, field, and/or subject area.
- Educators participants will utilize a structured process to systematically locate, evaluate, and formally review OER resources for one of their courses.
- 30 educators will earn an in-house OER Mastery Path Certificate, reflecting their completion of professional development activities related to OER knowledge and skills.
- At least 10 educators members will adopt the use of OER and integrate them into their teaching and course design.
- Educators participants who adopt OER resources will evaluate the impact of the use of OER on their teaching practices and course design.
- Educators participants who adopt OER resources will develop at least one OER enabled practice, assignment or activity that allows students to update, evaluate or create OER.

Phase 1: OER Mastery Path

The OER Mastery Path will be a suite of professional development, trainings and workshops centered around the theme of OER, and is designed to help educators build awareness and skills for locating and critically evaluating OER. These trainings, workshops, and opportunities for discussion will be offered in a variety of modalities and will model best practices by effectively utilizing OER content. Thirty educators

⁸ Colvard, Nicholas B.; Watson, C. Edward; Park, Hyojin. The impact of open educational resources on various student success metrics in International Journal of Teaching and Learning in Higher Education, v30 n2 p262-276 2018.

members will complete each of the milestones on the OER Path and will complete a “capstone project” by formally reviewing OER content, thus contributing to the overall usability of OER resources. Educators who complete the OER Mastery Path will earn a certificate of completion.

The OER Mastery Path consists of seven milestones:

- Why OER Matters (Affordable Learning Georgia Tutorials or comparable OER resource)
- Why OER is Important at CU Denver (F2F/Zoom Discussion)
- Open Licensing, Public Domain, and Creative Commons (An Introduction to Open Ed EdX MOOC)
- Finding Open Educational Resources (F2F/Zoom Workshop - Auraria Library)
- One-on-one consultation (with a librarian, instructional designer, and/or educator peer)
- Evaluating Resources
- Capstone Project (formal evaluation of OER)

Phase 2: OER Community of Practice

A community of practice (CoP) is a group of educators who share a concern or passion for something they do and learn how to do it better as they interact regularly. On the CU Denver campus educators are building a tradition of participation in CoPs where they tackle teaching and learning problems with a sense of autonomy, mastery, and purpose. The OER Community of Practice will consist of 10 educators who teach Core Courses and are dedicated to adopting and integrating OER into a course. The group will work together to ask and answer key questions around the pedagogical and design implications of adopting and integrating OER into their courses. The CoP will provide educators participants with an opportunity to think through, practice, and receive feedback from colleagues as they integrate OER into their course design.

As a group, the CoP will discover and discuss several key issues including topics like:

- Explaining OER to your students
- Course design and OER
- Editing OER
- Creating OER
- Technologies for OER
- OER enabled pedagogy and practices
- Evaluating and improving accessibility of OER
- Integrating student input into adaptable OER materials.

General discussions in the OER CoP will focus on discovery and peer learning. As the group builds their knowledge about design and implementation of OER each individual member of the CoP will work on their own individual OER implementation project. These could involve making changes to the design of a course to complement the use of OER, creating OER enabled assignments, remixing or revising OER textbooks or other resources, or creating OER resources. During CoP gatherings the group will provide peer feedback to one another on the individual projects. The OER CoP will also have a team of experts available to consult with them on-demand. The OER consultation team will include an instructional designer, librarian, access and usability expert, educational technology expert, and an open pedagogy expert. Consultation could take the form of on-demand presentation to the CoP or individual consultation with CoP members.

Upon completion of the OER CoP educator participants will adopt and incorporate OER into their Core Course. They will use MERLOT's content creator to create teaching e-portfolios explaining how they redesigned their courses using OER to improve student success. These portfolios will be made available on a publicly facing website hosted the CU Denver Center for Faculty Development and/or Auraria Library.

Simultaneous to this effort, we are beginning a process mandated by the Regents of the University of Colorado to create and deliver a fully online undergraduate degree at a student cost of \$15,000. We are committed to delivering this degree with OER. To that end, our outcomes include ensuring full OER in all courses offered by CU Denver associated with the \$15,000 undergraduate degree that will begin matriculating students in the Fall of 2023.

Appendix E

Description of Boulder's Open Education Program

Program Goals

The CU Boulder Open CU Initiative activities will include workshops and awareness campaigns, trainings and educational opportunities, course redesign incentives, as well as incentives for educators to explore and review OER.

The Open Education Program at CU Boulder aims to:

- Strengthen and increase awareness of the benefits and availability of open educational resources (OER) and open pedagogies.
- Encourage the use of alternatives to high cost textbooks and course materials, through educator adoption, adaptation, and creation of OER, and to lower the cost of learning for students.
- Encourage a teaching culture that explores and adopts open pedagogies.
- Increase access to required course materials, for all students.
- Increase the number of University of Colorado Boulder educators advocating for and utilizing OER.
- Attend to OER awareness among graduate teaching assistants, recognizing their current and potential, future contributions as educators.

Participants will:

- Be able to articulate benefits and potential of using, adapting, or creating OER.
- Be able to identify OER tools and repositories.
- Attain a certificate documenting their participation.
- Implement OER and/ or open pedagogies into their courses and teaching.

Local implementation of Open CU Initiative

Workshops: The CU Boulder OER Leads and campus colleagues will design and offer a number of OER related workshops. Enrollment in the workshops is open to all CU Boulder educators. To be eligible for the Course Redesign funding or to receive an OER Review incentive, educators will be required to attend and complete specific workshops.

Course Redesign: Educators will be selected to participate after completing an online questionnaire indicating their interest and proposed course redesign project. Upon completion educators will receive an incentive as well as a certificate of completion.

OER Review: Educators willing to review and report on OER quality and applicability to CU Boulder courses will be eligible to receive an incentive. Reviews will provide a concise summary of the work and, offer a critical assessment of the content, addressing these 10 criteria ([Rubric](#)).

Facilitators

- OER Leads: Caroline Sinkinson, Associate Professor; Merinda McLure, Associate Professor; Melissa Cantrell, Assistant Professor.
- Leslie Reynolds, Associate Professor and Senior Associate Dean



The Leads will consult with colleagues from: the Office of Information Technology, the Arts & Sciences Support of Education through Technology, the Department of Accessible Technology. The project will be deeply informed by the CU Boulder OER Advisory Committee and the results of their forthcoming report.

CU Boulder will commit the time and human resources of the OER Leads.

The OER Leads will seek internal and campus support whenever possible.

Appendix F

Fall 2017 list of 50 highest enrollment courses by campus

	INST	COURSE ID	COURSE DESC	# Enrolled (all sections)
1	BLD	ECON2010	Prin of Microeconomics	4,028
2	BLD	PHYS1110	General Physics 1	2,596
3	BLD	CHEM1113	General Chemistry 1	1,974
4	BLD	APPM1350	Calculus 1 for Engineers	1,915
5	BLD	EBIO1210	General Biology 1	1,477
6	BLD	WRTG1150	1st Yr Writing/Rhetoric	1,455
7	BLD	PSYC1001	General Psychology	1,390
8	BLD	PHYS1120	General Physics 2	1,370
9	BLD	CSCI1300	CS 1: Starting Computing	1,252
10	BLD	PHYS1140	Experimental Physics 1	1,230
11	BLD	SOCY1001	Intro to Sociology	1,112
12	BLD	CHEM1021	Introductory Chemistry	1,056
13	BLD	CHEM3311	Organic Chemistry 1	1,028
14	BLD	APPM2360	Intro Diff Eq W/Lin Alg	1,013
15	BLD	MATH1112	Math Analysis in Business	996
16	BLD	EBIO1230	General Biology Lab 1	980
17	BLD	APPM2350	Calculus 3 for Engineers	974
18	BLD	CHEM1114	Laboratory Gen Chem 1	949
19	BLD	PHYS2010	General Physics 1	942
20	BLD	PSCI1101	Intro to American Politics	913
21	BLD	WRTG3020	Topics in Writing	908
22	BLD	ENVS1000	Intro Environmental Studies	886
23	BLD	CHEM1133	General Chemistry 2	868
24	BLD	MATH1300	Calculus 1	855
25	BLD	SOCY1004	Deviance in US Society	836
26	BLD	PSCI2012	Intro/Compar Politics	828
27	BLD	BCOR2002	Prin of Accounting & Finance	814
28	BLD	BADM1250	First-Yr Seminar for Business	808
29	BLD	BCOR2003	Busn Law, Ethics & Soc Rspnsbl	807
30	BLD	BCOR2001	Principles of Mktg & Mgmt	806
31	BLD	ATOC1050	Weather & the Atmosphere	771
32	BLD	ENGL3000	Shakespeare/Nonmajors	761
33	BLD	CSCI2270	Comp Sci II: Data Struct	750
34	BLD	PSCI2223	Intro International Relations	742
35	BLD	IAFS1000	Global Issues & Intl Aff	732
36	BLD	ANTH2010	Intro to Bio Anthropology 1	719
37	BLD	CSCI1320	CS1: Engineering Applications	684
38	BLD	PHIL1200	Contemporary Social Problems	682
39	BLD	GEOL1010	Introduction to Geology	678
40	BLD	ECON2020	Prin of Macroeconomics	668
41	BLD	GEEN1400	Engineering Projects	664
42	BLD	APPM1360	Calculus 2 for Engineers	654
43	BLD	BCOR1030	Communication Strategy	643
44	BLD	GEOG1982	World Regional Geography	630
45	BLD	MATH2510	Introduction/Statistics	618
46	BLD	GEOG1972	Environment-Society Geography	618
47	BLD	CSCI2400	Computer Systems	618
48	BLD	MCEN2000	Mech Engr as a Profession	613
49	BLD	BCOR1015	The World of Business	605
50	BLD	CMCI1010	Concepts and Creativity 1	604



	INST	COURSE ID	COURSE DESC	# Enrolled (all sections)
1	UCCS	GPS 1010	Gateway Program Seminar	1,982
2	UCCS	ENGL1310	Rhetoric and Writing I	1,185
3	UCCS	CHEM1201	Introduction to Chemistry	614
4	UCCS	ECON1010	Introduction to Microeconomics	607
5	UCCS	PSY 1000	General Psychology	584
6	UCCS	MATH1040	College Algebra	574
7	UCCS	BIOL2010	Human Anatomy & Physiology I	554
8	UCCS	HUM 3990	Special Topics in Humanities	553
9	UCCS	PORT3000	Writing Portfolio Assessment	517
10	UCCS	BIOL1300	Gen Biology: Organismic Biol	473
11	UCCS	SOC 1110	Introduction to Sociology	422
12	UCCS	ENGL1300	Rhet/Writing I Stretch A	408
13	UCCS	BIOL1310	Gen Biol: Organismic Biol Lab	406
14	UCCS	ANTH1040	Intro to Cultural Anthropology	387
15	UCCS	COMM2100	Public Speaking	384
16	UCCS	MATH1050	Elem Functions for Calculus	373
17	UCCS	CHEM1401	General Chemistry I	358
18	UCCS	COMM2010	Oral Comm in Workplace	337
19	UCCS	INFS1100	Prod Apps for the Workplace	334
20	UCCS	ENGL1410	Rhetoric and Writing II	330
21	UCCS	ENTP1000	Intro to Entrepreneurship	316
22	UCCS	ACCT2010	Intro to Financial Accounting	308
23	UCCS	CHEM1402	General Chemistry Lab I	306
24	UCCS	PHIL1120	Critical Thinking	291
25	UCCS	MATH1350	Calculus I	291
26	UCCS	MKTG3000	Principles of Marketing	287
27	UCCS	BIOL2020	Human Anatomy & Physiology II	282
28	UCCS	CJ 1001	Intro to Crim Justice	269
29	UCCS	PSC 1100	The American Political System	265
30	UCCS	PHIL1000	Introduction to Philosophy	261
31	UCCS	ENGL2080	Business & Admin Writing	257
32	UCCS	CHEM3102	Organic Chemistry Lab I	244
33	UCCS	MATH1120	Calc for Business & Economics	241
34	UCCS	ENGL2090	Tech Writing & Presentation	241
35	UCCS	INOV1010	The Innovation Process	240
36	UCCS	ECON2020	Introduction to Macroeconomics	235
37	UCCS	MGMT3300	Intro to Mgmt & Organization	229
38	UCCS	BLAW2000	Business Law	227
39	UCCS	PES 1050	General Astronomy I	220
40	UCCS	COMM1020	Interpersonal Communication	217
41	UCCS	MATH1360	Calculus II	212
42	UCCS	FNCE3050	Basic Finance	209
43	UCCS	QUAN2010	Business Statistics	208
44	UCCS	MATH2350	Calculus III	207
45	UCCS	MAE 1502	Principles of Engineering	204
46	UCCS	WEST1010	Intro to Soc Justice Studies	203
47	UCCS	PES 1110	General Physics I - Calc Based	202
48	UCCS	PES 1010	Phys Life Sci I: Algebra Bsd	199
49	UCCS	HSCI1020	Personal Fitness and Wellness	192
50	UCCS	HSCI2070	Nutrition for Health Prof	191



	INST	COURSE ID	COURSE DESC	# Enrolled (all sections)
1	DEN	ENGL1020	Core Composition I	1,569
2	DEN	ENGL2030	Core Composition II	793
3	DEN	PSYC1000	Introduction to Psychology I	727
4	DEN	BIOL2051	General Biology I	655
5	DEN	BIOL2071	General Biology Lab I	576
6	DEN	CHEM2031	General Chemistry I	546
7	DEN	MATH1110	College Algebra	541
8	DEN	CHEM2038	General Chemistry Lab I	469
9	DEN	SOCY1001	Introduction to Sociology	455
10	DEN	ECON2022	Prncpls of Econ:Microeconomics	433
11	DEN	BIOL3244	Human Anatomy	390
12	DEN	MATH1401	Calculus I	364
13	DEN	PMUS1001	Music Appreciation	360
14	DEN	MATH1010	Math for Liberal Arts	325
15	DEN	ENVS1042	Intro to Environmental Science	298
16	DEN	PSYC2090	Statistics & Research Methods	290
17	DEN	MATH1130	Precalculus Mathematics	290
18	DEN	ACCT2200	Fnce Acct-Finan Statemt Anlsys	290
19	DEN	ISMG2050	Intro Busn Problem Solving	288
20	DEN	FNCE3000	Principles of Finance	287
21	DEN	PSYC2220	Biological Basis of Behavior	272
22	DEN	PHYS2010	College Physics I	267
23	DEN	BANA3000	Operations Management	266
24	DEN	MKTG3000	Principles of Marketing	265
25	DEN	ECON2012	Prin of Econ: Macroeconomics	264
26	DEN	CHEM3411	Organic Chemistry I	255
27	DEN	ANTH1303	Intro Biological Anthropology	247
28	DEN	COMM2050	Business-Professional Speaking	247
29	DEN	BIOL3832	General Genetics	246
30	DEN	ENGR1130	Chemistry for Engineers	244
31	DEN	BIOL3654	General Microbiology	240
32	DEN	COMM3271	Communication and Diversity	240
33	DEN	BIOL3225	Human Physiology	240
34	DEN	MATH2411	Calculus II	238
35	DEN	MATH1120	College Trigonometry	237
36	DEN	MGMT3000	Mangng Individuals-Teams	235
37	DEN	MATH1070	College Algebra for Business	233
38	DEN	HIST3121	The World at War, 1914-1945	231
39	DEN	PSYC1005	Introduction to Psychology II	229
40	DEN	PBHL2001	Introduction To Public Health	226
41	DEN	BIOL2061	General Biology II	225
42	DEN	ISMG3000	Technology In Business	223
43	DEN	PMUS1500	General Recital	222
44	DEN	MATH2830	Introductory Statistics	219
45	DEN	CRJU1000	Criminology & CJ: An Overview	218
46	DEN	BIOL3611	General Cell Biology	211
47	DEN	ENGL3170	Business Writing	210
48	DEN	CHEM2061	General Chemistry II	208
49	DEN	PHYS2030	College Physics Lab I	206
50	DEN	PHIL1012	Phil: Relationship Indv to Wrld	206