

**IMMERSIVE AND GAME-BASED LEARNING FACULTY CHALLENGE
ROUND 2**

ARAPAHOE COMMUNITY COLLEGE

Project Name: In Their Virtual Shoes: A Domestic Violence Simulation

Project Abstract: Domestic violence is a challenging and sensitive topic. An effective paper-based simulation from WSCADV called “In Her Shoes” promotes a deeper understanding of this topic. This grant proposal supports taking this tool and creating an electronic, immersive environment for students to ultimately experience the reality of domestic violence. As a project leader I bring a wealth of knowledge and experience in the area of Victimology, particularly domestic violence. The focus of my PhD was gender and violence. I have taught in this area for 13 years, been involved in research, and served as a victim advocate.

Total Funding Amount Requested: \$59,000.00

Project Name: Rhetoric and Composition: The Persuasive Power of Video Games as Paratexts

Project Abstract: *Rhetoric and Composition: The Persuasive Power of Video Games as Paratexts*, an ENG122 English Composition II course, will explore the rhetorical discourse and appeals of Adventure and RPG games and socio-cultural meanings that influence the persuasive content and design of those games, while emphasizing rigorous writing analysis and game creation through critical thinking and research. The course will run as a hybrid class at ACC and as a MOOC using a combination of social media, commercial off the shelf games, and immersive simulations. Trainings and workshops will be provided throughout CCCS to assimilate gamification into other ENG122 classes.

Total Funding Amount Requested: \$88,351.88

COMMUNITY COLLEGE OF AURORA

Project Name: Checking In: Business Behind the Scenes

Project Abstract: CCA will implement a multi-level business simulation competition for BUS115 students. Utilizing a D2L virtual lab and the CESIM OnService program, students work in teams to manage all the business activities of a family hotel. Winning teams maximize the overall return to shareholders which consolidates key success factors into one measurable criterion. Competition rounds begin with intra-class (within each class), move to inter-section (between classes) and end with an inter-campus scaling round in spring 2014 where teams from throughout CCCS compete against one another with one team being declared the CCCS champions.

Total Funding Amount Requested: \$99,997.50

Project Name: The Best of Blended Learning for the 21st Century

Project Abstract: The Community College of Aurora proposes *The Best of Blended Learning for the 21st Century*, a project designed to address the need to increase retention and completion through the development of best practices for innovative, immersive blended learning courses. Project objectives include researching existing innovative course design; developing a manual of engaging practices; training a designated group of instructors from CCA, ACC, and RRCC to help them develop full courses aligned with CCCS competencies for stand-alone use by instructors across the CCCS; and hosting a dissemination event to highlight successful blended course design and materials.

Total Funding Amount Requested: \$169,533.00

Total Amount Funded: \$100,000.00

Project Name: TheiaSys

Project Abstract: TheiaSys will give students studio level evaluative tools to predict audience engagement in their own student film projects. By using real world resources, students will be able to focus themselves on the essentials involved in audience engagement, so that they can raise the quality of their production projects. TheiaSys will be fundamental in shifting upper level production classes from traditional classroom delivery to hybrid instruction, reserving traditional classroom time for individual meetings to evaluate and partner in the production of student projects.

Total Funding Amount Requested: \$99,500.00

Project Name: Model United Nations

Project Abstract: The Model United Nations will immerse students into the practice of international politics and diplomacy. As a multi-disciplinary collaboration our learning objectives focus on public speaking, research methodology, written communication, group engagement and the development of international public policy. The simulation requires student delegations to adopt a UN member state and work to advance that state's goals within the UN system. National delegations are subdivided into working groups of two students who will represent their state within different UN agencies. Participants will develop the skills necessary to effectively engage the public policy process while simultaneously exploring their own political efficacy.

Total Funding Amount Requested: \$64,840.00

Total Amount Funded: \$34,840.00

**IMMERSIVE AND GAME-BASED LEARNING
FACULTY CHALLENGE, ROUND 2**

Project Name: Law and Order EDU: CCA Paralegal Program Courtroom

Project Abstract: CCA's Paralegal and Criminal Justice programs are converting a classroom into a fully functioning courtroom. The project's aim is to give students an opportunity to experience the workings of litigation in a real-life setting, to learn in a way that cannot be duplicated in a traditional classroom. The courtroom addresses a need for students to enter the workforce with the practical skills necessary to assist in litigation. It will help bolster the curriculum by allowing more real-life learning. The Program will tie the courtroom to learning objectives in many classes and disciplines, leading to increased retention and completion.

Total Funding Amount Requested: \$100,000.00

CCCONLINE

Project Name: CCCS Hackathon

Project Abstract: This project proposes using Hackathon events that flip the campus and online classroom using challenges, competition and game elements to more deeply engage CSC students in the content. Leaderboards, achievements, awards and ranks will be utilized as motivators through the semester for retention leading up to the events. These events allow CCCS students, faculty and staff to collaborate on projects during a live synchronous event and provide authentic assessment of each student's mastery of course competencies. The Hackathon will also serve to showcase CCCS students and CSC programs as all member colleges will be invited to participate and form teams.

Total Funding Amount Requested: \$93,069.25

COMMUNITY COLLEGE OF DENVER

Project Name: Exponential Blocks

Project Abstract: By creating a game for iPads, with an internet version available as well, we will be able to support student learning of how exponents work. Specifically the following topics will be addressed: Find the prime factorization of a number in MAT 030; Reduce Fractions to lowest terms in MAT 030; Find the LCM in MAT 030; Find the GCF in MAT 060; Reduce Rational Expressions in MAT 090; The meaning of negative exponents in MAT 090, and The meaning of fractional exponents in MAT 099.

Total Funding Amount Requested: \$84,000.00

**IMMERSIVE AND GAME-BASED LEARNING
FACULTY CHALLENGE, ROUND 2**

Project Name: Knowledge Quest: A Journey to a Flipped and Accelerated Classroom

Project Abstract: *Knowledge Quest: A Journey to a Flipped and Accelerated Classroom* will develop an interactive game that will be used to deliver a flipped and accelerated version of Reading 060 and 090 and English 060 and 090—four of the Community College of Denver’s Developmental Education core courses. Knowledge Quest will be built using iSpring software, and students will access Knowledge Quest through a web portal using a personal tablet computer that will be provided. Knowledge Quest will enable teachers to provide Reading 060 and 090 and English 060 and 090 as a single accelerated course using a flipped classroom model.

Total Funding Amount Requested: \$63,700.00

Project Name: Shared Vision, Shared Resources: Piloting the Metro-Area CCCS STEM Institute

Project Abstract: This is a collaborative project involving CCD, CCA, ACC, and RRCC. CCD will serve as the project lead in developing a flipped classroom model for STEM courses including Chemistry, Biology, Mathematics, Developmental Mathematics, Physics, and Computer Science. Research on best practices and the development of an annotated resource webliography and CCCS college faculty learning community in support of a STEM Institute are the primary outcomes. Piloting the model in STEM classes at each college will occur as early as Fall 2013. The ultimate goal is to facilitate improved STEM content delivery, pipeline development, and resource sharing among CCCS colleges.

Total Funding Amount Requested: \$100,000.00

Project Name: ACCESS – Achieving College Competencies Elevating Student Success

Project Abstract: The proposed ACCESS game will be a web-based game modeled after the board game “Life” that will enable AAA 109 instructors to offer the course in a flipped format—allowing students to receive information that would traditionally be received through lecture in the classroom via online videos, podcasts, downloadable lectures, web-based articles, social media, and out-of-class readings, while in class time will be spent applying this knowledge by playing the ACCESS game on CCD’s Desire 2 Learn (D2L).

Total Funding Amount Requested: \$25,700.00

MORGAN COMMUNITY COLLEGE

Project Name: Hybrid and Electric Vehicle Simulator, Supporting Electronics Trainers and Software, and Classroom Student Response System (aka “clicker system”)

Project Abstract: To enhance education on automobiles currently produced the Automotive Service Technology Program at Morgan Community College proposes to purchase a Hybrid/Electric Vehicle Simulator and supporting automotive electronics technology training system for engine management and ignition systems. The package uses a virtual diagnostics simulator for troubleshooting automotive electronics giving students a better knowledge of automotive electricity required of hybrids and all late model automobiles. The Simulator enhances the teaching of Hybrid and Electric Vehicle Technologies. Supporting trainers and software modules teach concepts required for understanding the principles of hybrid and traditional vehicle systems.

Total Funding Amount Requested: \$63,024.00

PIKES PEAK COMMUNITY COLLEGE

Project Name: Colorado Reacting to the Past Immersive Gaming Grant

Project Abstract: The Colorado Consortium of Reacting to the Past, based at Pikes Peak Community College, proposes to expand the use of the immersive, game-based Reacting to the Past pedagogy in Colorado, especially among Colorado Community College System institutions. The project seeks to introduce and train faculty to implement published Reacting games and also to foster the creation of five, shorter, chapter-length games that are face-to-face, hybrid and online compatible. Activities would include outreach, a regional conference and workshop, the selection and mentoring of the pilot teams, a play testing conference and actual piloting and assessment in college courses.

Total Funding Amount Requested: \$99,133.90

Project Name: Ethical Theory Adventure Game

Project Abstract: The proposed Pikes Peak Community College project will develop an online, text-based, ethical theory adventure game for our popular ethics course, Philosophy 112. The game will address student learning gaps and variability in instructional effectiveness that were identified using 2-1/2 years of assessment data. Project realization offers field-specific work for students and collaboration by faculty and students in philosophy, computer science, and graphic design. We will collect detailed data to drive improvements through two pilot rounds. The team aims to develop a consistent instructional approach to ethical theory and its application that is scalable to philosophy departments system wide.

Total Funding Amount Requested: \$82,677.83

RED ROCKS COMMUNITY COLLEGE

Project Name: Virtual Environment for Instruction Project (VEIP)

Project Abstract: Red Rocks Community College (RRCC) will host a virtual lab environment through a collaborative project with Front Range Community College (FRCC), Larimer Campus and Community College of Aurora (CCA). The goal of the project is to develop immersive project approach to curriculum for mobile device security, computer science secure code modules, computer and network security courses. This will include pre-requisite courses. As leaders in the development of virtual machines, FRCC, CCA, and RRCC will engage computer science, cyber security and computer networking students in hands-on labs that will include writing secure code, implementing, managing and securing mobile devices, computers and networks.

Total Funding Amount Requested: \$98,597.54

Project Name: HVA Gaming

Project Abstract: RRCC will serve as the lead institution for the HVA Gaming project, implemented in collaboration with Pikes Peak Community College. The HVA Gaming project will enhance skills mastery and persistence among Heating, Ventilation and Air Conditioning students by “bolting-on” a gaming interface to existing software being incorporated into HVA courses. The project will road-test a gaming interface that can be easily adopted by similar lab-intensive technical education programs. With the addition of the gaming interface, in-class lab time will be reduced, while skills mastery will be enhanced through a virtual lab environment allowing for the adaptation of the HVA 102 curriculum for hybrid delivery.

Total Funding Amount Requested: \$99,731.63

TRINIDAD STATE JUNIOR COLLEGE

Project Name: CO2 Car Design Challenge

Project Abstract: The CO2 Car Design Challenge is an immersive learning experience that combines Lean Manufacturing and rapid prototyping with gaming and immersive instructional design. Students in the Machining program team up in pairs to compete in a CO2 car challenge. Teams start by designing a car in Solidworks CAD system that will be used in several competitions. Competitions range from CO2 drag race to non-powered gravity race, kind of like a pinewood derby car. Design and style are also assessed by their peers. Solidworks also simulates stress, strain, and aerodynamics that will also be assessed.

Total Funding Amount Requested: \$99,139.00

**IMMERSIVE AND GAME-BASED LEARNING
FACULTY CHALLENGE, ROUND 2**

SUMMARY

College	Project Name	Funding Amount Requested	Amount Funded
ACC	In Their Virtual Shoes: A Domestic Violence Simulation	\$59,000.00	\$59,000.00
ACC	Rhetoric and Composition: The Persuasive Power of Video Games as Paratexts	\$88,351.88	\$88,351.88
CCA	Checking In: Business Behind the Scenes	\$99,997.50	\$99,997.50
CCA	The Best of Blended Learning for the 21 st Century	\$169,533.00	\$100,000.00
CCA	TheiaSys	\$99,500.00	\$99,500.00
CCA	Model United Nations	\$64,840.00	\$34,840.00
CCA	Law and Order EDU: CCA Paralegal Program Courtroom	\$100,000.00	\$100,000.00
CCCOnline	CCCS Hackathon	\$93,069.25	\$93,069.25
CCD	Exponential Blocks	\$84,000.00	\$84,000.00
CCD	Knowledge Quest: A Journey to a Flipped and Accelerated Classroom	\$63,700.00	\$63,700.00
CCD	Shared Vision, Shared Resources: Piloting the Metro-Area CCCS STEM Institute	\$100,000.00	\$100,000.00
CCD	ACCESS – Achieving College Competencies Elevating Student Success	\$25,700.00	\$25,700.00
MCC	Hybrid and Electric Vehicle Simulator, Supporting Electronics Trainers and Software, and Classroom Student Response System	\$63,024.00	\$63,024.00
PPCC	Colorado Reacting to the Past Immersive Gaming Grant	\$99,133.90	\$99,133.90
PPCC	Ethical Theory Adventure Game	\$82,677.83	\$82,677.83
RRCC	Virtual Environment for Instruction Project (VEIP)	\$98,597.54	\$98,597.54
RRCC	HVA Gaming	\$99,731.63	\$99,731.63
TSJC	CO2 Car Design Challenge	\$99,139.00	\$99,139.00
Total Funding Requested:		<u>\$1,589,995.53</u>	
Total Amount Funded:			<u>\$1,490,462.53</u>