COASTAL ALABAMA
COMMUNITY COLLEGE

DYNAMIC REALITY
TECHNOLOGIES

NSF AWARD #1800942

PURPOSE OF THE DRT PROJECT

This project addresses a growing need to educate technicians for the emerging field of simulated environments. Advances in dynamic reality tools have enabled simulated environments to become a valuable tool for efficient, cost-effective corporate training across all sectors of industry. These simulated learning environments create learning experiences that are safe for employees and the public and offer new ways to engage and educate incumbent employees. The proliferation of simulated learning environments has created a demand for technicians who are trained in using extended reality tools, including virtual reality, augmented reality, and mixed reality, to develop simulations and industry-based learner experiences. This project will address this need by developing and implementing an Associate of Applied Science in Dynamic Reality Technologies program. Industry, faculty, and a U.S.-based international association (Technical Association of the Pulp and Paper Industry) will collaborate to develop the curriculum. Community college professional development workshops will prepare faculty to teach in the new curriculum. Students in the Dynamic Reality Technologies program will extend their learning and develop workplace experience by participating in industry internships. Results from the project will contribute to the formation of national standards for virtual reality and augmented reality education. This project has the potential to contribute to the development of the future advanced technician workforce, as well as improve industrial training.

The aim of this project is to develop an industry-responsive technician education program with an aligned, comprehensive curriculum, prototype training simulations, and industry-based student experiences to support instruction directed by knowledgeable and experienced faculty. The project plans to engage corporate partners in providing input about the curriculum, as well as internship and research experiences for the students. The project will develop, pilot, implement, and evaluate the curriculum, and create an open educational resource system to disseminate curriculum and related resources. A Dynamic Reality Technologies Training Center with virtual-, augmented-, and mixed-reality training capabilities will provide students with additional educational opportunities. Symposia will be organized to promote adoption of the curriculum among community college faculty. The knowledge gained during this collaboration between Coastal Alabama Community College and industry will inform the development of curriculum standards for virtual reality and augmented reality curricula. The technician education program will initially focus on the pulp and paper and the elevator industries, and expand to other industries over the course of the project.

This award reflects NSF's statutory mission and has been deemed worthy of support through evaluation using the Foundation's intellectual merit and broader impacts review criteria.

WHAT TO EXPECT

LEARN 3D MODELING AND GAME DESIGN

LEARN HOW TO SOLVE REAL-WORLD PROBLEMS WITH XR TECHNOLOGY

PROGRAM INTERACTIVITY INTO GAME SIMULATIONS

PRACTICE WHAT YOU LEARNED BY PARTICIPATING IN AN INTERNSHIP PROJECT

STUDENTS WILL

GAIN IN-FIELD EXPERIENCE

DEVELOP A PROFESSIONAL PORTFOLIO

CREATE MARKETING MATERIALS, INCLUDING AN ELECTRONIC PRESS KIT

LEARN ABOUT STARTUPS AND INVESTOR FUNDING

BECOME STIFF COMPETITION FOR OTHER JOB APPLICANTS

OUR DEGREES

Associate in Applied Science (AAS)

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