

**New Program Proposal
Center for Workforce Development (CUCWD)
Clemson University**

Summary

Clemson University requests center designation from the Commission on Higher Education for the Center for Workforce Development (CUCWD), to be effective immediately upon approval.

The proposal was approved by the Clemson University's Board of Trustees on October 21, 2011. A purpose of CHE approval of Centers is to permit sponsoring institutions to seek funding from the General Assembly. The program planning summary was submitted to the Commission on November 1, 2011. It was reviewed by the Advisory Committee on Academic Programs without substantive comment and voted upon favorably on January 19, 2012. The full proposal was received on February 13, 2012.

The Center for Workforce Development has been in existence for less than one year as a research unit at Clemson University. It has a four-fold mission, as follows:

1. To expand automotive/aviation technician education programs capacity with partnerships with technical colleges via innovative, readily available, and cost-effective e-learning options;
2. To increase access, support recruitment, and learning for students in automotive and aviation technician education programs by creating a South Carolina Aviation and Automotive (SC-A²);
3. To broadly disseminate advanced technology e-learning modules for use by automotive and aviation technician education programs and industry; and
4. To advance CUCWD towards long-term sustainability.

According to the proposal, the Center will be unique in that it will be a regional center for e-learning to conduct automotive and aviation technical education using virtual classrooms, personalized learning and e-learning technologies. The proposed Center will work in collaboration with Florence-Darlington Technical College, Greenville Technical College, Trident Technical College and in partnership with Advance Technological Education National Center for Aerospace Technical Education, National Center Automotive Manufacturing Technical Education Collaborative, Consortium for Alabama Regional Center for Automotive manufacturing, and the South Carolina Automotive and Aviation industry. Additionally, the proposed Center will work closely with other state-wide workforce development and educational entities including eight South Carolina Technical College Partners, the South Carolina Department of Education, the South Carolina Equity Resource Center, the South Carolina Department of Commerce, and the South Carolina Center for Accelerated Training. The proposal further states that the proposed Center will align to Clemson University's land-grant mission of "establishing a 'high seminary of learning' and to 'develop the material resources of this state'." Additional information concerning the connection of the Center to the technical colleges was requested at Committee on Academic Affairs and Licensing meeting on April 5, 2012. Representatives from Clemson University responded that the Center will serve as a resource for all technical colleges that offer aviation and automotive programs and that the technical colleges are already part of the Center

through grants from the National Science Foundation (NSF) and the Department of Labor (DOL). The proposed Center for Workforce Development will help create resources on visualization, simulation and e-learning tools that can be used by the technical colleges.

The proposed Center will not serve as a degree-granting academic unit and therefore, will have no admission criteria or enrollment figures. Students conducting research on sponsored programs supported by the proposed Center will be enrolled in degree-granting academic units at Clemson University. The proposed Center will include faculty from the Departments of Industrial Engineering, Mechanical Engineering, Automotive Engineering, and Computer Science. Students in programs affected by CUCWD will acquire the technical skills and general competencies that will afford them employment opportunities in a variety of industries. A question was raised at the CAAL meeting on April 5, 2012, about the faculty credentials matching the program focus. Representatives from Clemson University responded that faculty in industrial engineering, computer science and mechanical engineering have been involved in various distance learning initiatives and that these faculty have expertise in education and learning, visualization/simulation, human factors, and cognition.

The proposed Center for Workforce Development at Clemson University will initially be composed of one administrator, seven Clemson University faculty, three Deans of Technology from Technical Colleges, nine faculty at engineering technology programs in the partner technical colleges, and one staff member. Additional staff and administration will be hired in years 3-5. According to the proposal, new hires will include one administrator (.2 FTE), and 2 staff (2 FTE) serving the new Center. In the first five years, a total of 3 new staff members (2.2 FTE) will be hired. Additional information was obtained from representatives from Clemson University to clarify the listing of new faculty members listed on the chart in the proposal. Clemson University communicated that the Center would not be hiring new faculty members, but the number of existing faculty members participating in the Center would increase by one each year.

The headquarters for the Center is, and will be, located on the Clemson Campus. Personnel and infrastructure (including equipment purchased under sponsored programs) will be housed in space allocated to the individual faculty members by their respective academic departments. The proposed Center will have three satellite offices to serve the geographically dispersed aviation and automotive industry located at CU ICAR in Upstate Greenville, Florence Darlington Technical College, and the Clemson University Restoration Institute in North Charleston. Rapid prototyping EON/3D Unity equipment that focuses on creating prototypes for simulations will be required for the Center and will be purchased through National Science Foundation (NSF) and Department of Labor (DOL) funds. According to the proposal, nonparticipating faculty, departments, and organizations may use Center supported equipment for a fee that reflects the costs of operation, maintenance, and upgrade.

New costs for the proposed Center are estimated to begin at \$432,000 in year one and include program administration, faculty salaries, research assistants, graduate assistants, clerical/ support personnel, supplies and materials, library resources, equipment, furniture, advisory board, travel/visiting scholars, promotion, and professional memberships. Estimated new costs increase to \$596,000 in the second year, \$674,500 in the third year, \$790,500 in the fourth year, and \$879,000 in the fifth year. The total estimated new cost is \$3,372,000 for the proposed Center's first five years. Revenues will be generated through research grants, contract research services and indirect funds generated on sponsored programs. Clemson University has initial funding from the National Science Foundation Advanced Technological Education program (\$2.4 million) and the Department of Labor Trade Adjustment Assistance Community College and Career Training grant (\$1 million) to create the Center for Workforce Development. According to the proposal, a detailed sustainability plan has been developed by Clemson University to outline new revenue sources to support the long-term sustainability of the Center beyond the original federal funding cycle. The proposal identified possible revenue sources as industrial consulting services, Automotive and Aviation Job Networks, Technology Transfer projects, extending E-Learning to other domains, and developing and delivering international E-Learning opportunities. The proposed Center will continue to seek funding from appropriate state, federal and industry funding sources. Estimated new costs and sources of funding can be found in the following table.

ESTIMATED COSTS BY YEAR						
CATEGORY	1st 2004- 2005	2nd 2005- 2006	3rd 2006- 2007	4th 2007- 2008	5th 2008- 2009	TOTALS
Program Administration	\$37,500	\$37,500	\$37,500	\$37,500	\$37,500	\$187,500
Faculty Salaries	\$140,000	\$140,000	\$210,000	\$300,000	\$390,000	\$1,180,000
Research Assistants	\$40,000	\$80,000	\$120,000	\$120,000	\$120,000	\$480,000
Graduate Assistants	\$60,000	\$80,000	\$80,000	\$80,000	\$80,000	\$380,000
Clerical/Support Personnel	\$20,000	\$30,000	\$60,000	\$60,000	\$60,000	\$230,000
Supplies and Materials	\$10,000	\$15,000	\$15,000	\$17,500	\$17,500	\$75,000
Library Resources	\$7,500	\$8,500	\$9,500	\$10,500	\$11,500	\$47,500
Equipment	\$50,000	\$100,000	\$25,000	\$30,000	\$20,000	\$225,000
Furniture	\$12,000	\$15,000	\$10,000	\$10,000	\$5,000	\$52,000
Facilities	\$0	\$0	\$0	\$0	\$0	\$0
Advisory Board	\$15,000	\$25,000	\$25,000	\$30,000	\$30,000	\$125,000
Travel/Visiting Scholars	\$20,000	\$30,000	\$35,000	\$40,000	\$45,000	\$170,000
Promotion	\$15,000	\$25,000	\$35,000	\$40,000	\$45,000	\$160,000
Prof. Memberships	\$5,000	\$10,000	\$12,500	\$15,000	\$17,500	\$60,000
TOTALS	\$432,000	\$596,000	\$674,500	\$790,500	\$879,000	\$3,372,000
SOURCES OF FINANCING BY YEAR						
Estimated FTE Revenue Generated from the State						
Tuition Funding (New students only)						
Other State Funding (Legislative Appropriations)						
Reallocation of Existing Funds						
Federal Funding	\$435,000	\$599,000	\$675,000	\$791,000	\$880,000	\$3,380,000
Other Funding*						
TOTALS	\$435,000	\$599,000	\$675,000	\$791,000	\$880,000	\$3,380,000

In summary, Clemson University has proposed that the existing Center for Workforce Development be granted approval by the Commission on Higher Education. The proposed Center will be a regional center for E-Learning to conduct Automotive and Aviation technical education using virtual classrooms, personalized learning, and E-Learning technologies. The proposed Center will work closely with other state-wide workforce development and educational entities. The proposed Center will consist of a collaborative team partnering Clemson University with Florence-Darlington Technical College, Greenville Technical College, Trident Technical College, Advance Technological Education (ATE) National Center for Aerospace Technical Education (SpaceTEC®), National Center Automotive Manufacturing Technical Education Collaborative (AMTEC), Consortium for Alabama Regional Center for Automotive Manufacturing (CARCAM), and the South Carolina Automotive and Aviation (A²) industry. Sources of current funding for the Center are research grants (National Science Foundation (NSF) Advanced Technological Education (ATE) program [\$2.4M], and the Department of Labor (DOL) Trade Adjustment Assistance Community College and Career Training (TAACCCT) grants [\$1M]), contract research services, and indirect funds generated on sponsored programs. Commission approval of the Center would provide “preferred status” for the Center for Workforce Development when seeking grants and contracts.

Recommendation

The Committee on Academic Affairs and Licensing commends favorably to the Commission approval of the Center for Workforce Development at Clemson University, to be implemented immediately upon Commission approval.