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SOUTH CENTRAL TENNESSEE WORKFORCE ALLIANCE

2014 Labor and Education Alignment Program (LEAP)

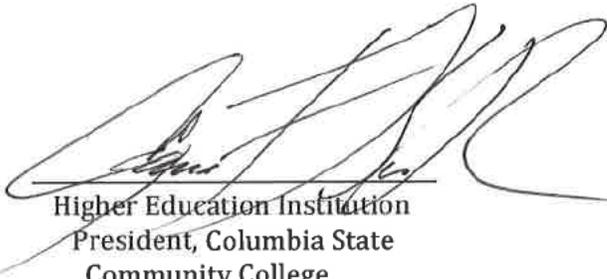
MAD about Technology- Mobile Applications Development and Innovative Technologies

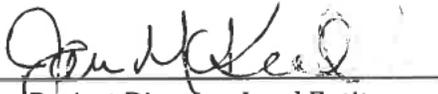
IN PARTNERSHIP WITH

1. Columbia State Community College
2. Williamson County Public Schools
3. Maury County Public Schools
4. Lawrence County Public Schools
5. Homeland
6. Lawrenceburg Utility Systems
7. neXperia
8. Wiremasters

Jan McKeel
8 Public Square
2nd Floor
Columbia TN 38401
(931) 375-4200
jan.mckeel@sctworkforce.org

Funding Requested:
\$135,918.00


Higher Education Institution
President, Columbia State
Community College
Janet F. Smith


Project Director, Lead Entity
Executive Director, South Central TN
Workforce Alliance
Jan McKeel

Abstract

The *MAD about Technology- Mobile Applications Development and Innovative Technologies* project will fund the formation of a new academic collaboration between the South Central Tennessee Workforce Alliance (SCTWA), Columbia State Community College (C-State), three school districts, and various local businesses. Based on the increase of the technology industry in today's workforce, there is a need to increase the available educational opportunities for students that will give them direct access to professionals in their area. The final result of the project will be a new academic program to train graduates in creating mobile applications. **By creating a new academic concentration, the South Central Tennessee Workforce Alliance and Columbia State Community College will be able to fill the need for mobile application developers in the south central Tennessee region.**

Students will learn how to develop these applications on the three major platforms; Android, iOS (Apple), and Windows, and the classes will be offered in three counties at three of C-State's five campuses. After completing their coursework, the students will do internships at local businesses to gain hands-on experiences in the industry. These internships will be paid and will introduce students to leaders in the field, increasing their chances of obtaining a job after completing the program. One cohort of students will complete the program by the close of the grant period, and the program will be continued without amendment through the established collaborations between the industry partners and C-State.

The total amount requested for the program is \$135,918.00 with a 10% match of \$13,591.80.

LEAP Program Proposal

Section 1- Program Need:

Tennessee's labor reports all agree that technology is not only an area of need for the state, but also an area of high potential growth. The report released in 2011 by the Center for Business and Economic Research (CBER) at the University of Tennessee states that programming and software development is one of the most under-supplied career pathways in Tennessee (Luna 5). One recent projection reported that around 7,000 more information technology professionals will be needed in Tennessee by 2019 (Greppin-Watts 8). Williamson County alone is expected to have a 36% increase in Application Software Development between 2013 and 2023 (Williamson Inc. 26).

Mobile application developers build, test, monitor, and update the software used in phones, tablets, and laptops (Mobile Application Developers 1). While some of the jobs in this field require a bachelor's degree, the report by CBER emphasizes that "the prevailing minimum requirement for an occupation might be a Master's degree, but someone with a Bachelor's degree might be eligible for the position by virtue of accruing on-the-job training and having access to a firm's internal job ladder" (Luna 12). This means that if internships are included in a student's training, the students who do not want to transfer to a four-year university after a community college are not automatically cut from this career field. Because of the range in education levels, there is a substantial opportunity for career growth when students enter this profession.

Today's reliance on mobile technology means that a wide variety of companies must create and maintain mobile applications. Just looking at the top 20 employers in Williamson County based on the recent report by the city council, prime businesses

such as medical centers and technology groups support this project for the skills it will bring to the area. Workers with fewer academic degrees are statistically more likely to remain locally, increasing the need to ensure they are trained in the most hireable fields (Luna 14).

There is currently no other program like this offered in the state. There are one or two courses offered by the state's regents online program, but not enough to fulfill an entire concentration or certificate program. The Board of Regents Community College System is discussing creating a specialty for mobile applications, but the plan has not been enacted at this time and will not be out by the time the MAD program places students in internships. As this is an area of active growth in the technology world, it is vital that the students begin classes as soon as possible.

By forming this collaboration, the MAD program will also serve to support the state policies put forth through the governor's Drive to 55 initiative. There is a direct alignment with the Drive to 55's Alliance plan, as the local businesses in this grant will now be directly supporting local education and vice versa. As this academic program has no set end date, the businesses will become invested in these students, see the value of the students in their workforce, and reap the benefit of a stronger local workforce development.

Additionally, by offering education in a field that students are already interested in, the program encourages student retention and a potential increase in students. As the TN Promise initiative begins and the Drive to 55 initiative continues, the students need to know that they have relevant programs to study with business mentors to guide them.

Section 2- Program Plan:

The product of this grant will be a new academic program at Columbia State for the mobile application development. This will be housed as a **concentration within the Information Systems Technology (IST) Associate in Applied Science degree program**. The students will be trained in the three major systems (Android, iOS (Apple) and Windows) to ensure their compatibility with the needs of the marketplace. The program will include an initial programming class to prepare them for the program, five application development courses, one networking course, a follow-up programming course, and the internship course in their last semester for a **total of nine requirements**. The courses will be offered at three of C-State's five campuses; **Franklin, Columbia, and Lawrenceburg**.

C-State plans to introduce an application development course this coming spring as a special topics course and currently has 10 students prepared to enter the course. One faculty member has received training in the topic and will assist with leading this course; the training of the future faculty members during the grant will position the program for expansion. The college will then market the class to other students in the major to fill the program. Based on the number of computers and mobile devices purchased in this grant, each section of the course will be able to host up to 24 students at a time based on the design of the lesson plans.

The MAD program will be led by a steering committee made of representatives from all of the major partners. The committee will be led by Jan McKeel of the SCTWA and Dean Dearl Lampley of C-State. Businesses, schools, and a community leader will represent all three counties (Lawrence, Maury and Williamson). At this time, about

eleven people are expected to serve on the committee, which will meet each semester (biannually) to discuss the progress of the program. The academic portion of the grant will be monitored by a small committee of C-State faculty and led by Dean Lampley. His resume is included in the Appendices.

Goals:

- 1) To meet current and future employer needs by equipping and launching an IT skills program that trains citizens to join the high tech workforce in Lawrence, Maury, and Williamson Counties.
- 2) To respond to regional data and community endorsements by establishing an educational program determined, designed, and delivered in a partnership among educator, employers, economic development and community leaders in Lawrence, Maury, and Williamson Counties.
- 3) To seed start-up training program, which communities and their community colleges can sustain, adapt, and use as a model for future partnerships.
- 4) To further the progress of Drive to 55 in TN by creating workforce-training programs that increases the number of citizens with associates degrees to fill future jobs in high demand fields.

The timeline for the grant provides a detailed month-by-month plan for implementing the MAD program. Please see Appendix B.

Section 3- Strength of Partnership:

The South Central Tennessee Workforce Alliance (SCTWA) will be the lead entity for MAD grant. The SCTWA's mission is "acting as a catalyst for collaboration among job seekers, employers, and workforce development partners. By developing a system that improves opportunities for the successful linking of job seekers and employers, the Alliance will help to create economic opportunity" (South Central Tennessee 1). Collaborating with both the local education institutions as well as the businesses will ensure that an economically beneficial pipeline is created in the technology sector. As the lead entity, the SCTWA agrees to hold the primary responsibility for monitoring the progress of the grant and acting as a liaison between the education, business, and community leaders.

Based on the location of this agency, Columbia State Community College (C-State) is the best higher education institution partner for this grant. C-State has five campuses spread throughout nine counties in the south central region of Tennessee and has a total student population exceeding 5,200. As a community college, C-State recognizes its role in developing programs that feed the needs of today's economy in areas that will give the students marketable skills. In addition to running the academic portion of the grant, C-State will retain the financial responsibility of the grant as dictated by the request for proposals. This is especially appropriate as the equipment purchased for the new mobile application program will be the property of the college once the grant concludes and will continue to serve future students.

High schools from all three counties are ready to partner on the grant. All three have discussed the need for this type of project and the value it will provide for their students. In

the case of the Williamson County School partner, Centennial High School, the Mac computer lab located in their Williamson's Information Technology Center of Excellence will be the lab used by C-State students. In the future, C-State hopes to fully train the Career and Technical Education (CTE) teachers at each campus to teach a mobile applications course. A summer camp for middle and high school teachers is also a long-term goal of integrating this program more broadly in the school district.

The business partners agree to provide paid internships to the students taught at C-State. The students will receive hands on experience in the field and will gain contacts that should assist their job search process upon graduation. The businesses that have supplied a letter of support and their promise to provide paid internships to these students currently include: Homeland, Lawrenceburg Utility Systems, neXperia, and Wiremasters. As the program continues and then becomes sustained by the C-State, businesses will continually be solicited to ensure that all students are afforded internship opportunities.

The local governments have also provided letters of support to show their willingness to assist with the success of the program. They were all instrumental in gaining the partnerships with the businesses and will serve as members of the steering committee and as ambassadors with the local businesses. The local governments, IT Skills Panel, and Nashville Technology Council sent letters of support for this grant proposal for your consideration. They are attached in Appendix E.

It is easy to see that this partnership unites the employers, community leaders, and educators in a three-county area to establish a training program that meets their workforce needs. Appendix C depicts the conceptual framework for this partnership.

Section 4- Budget Plan:

The grand total of grant money for this grant is \$135,918.00. The match amount is \$13,591.80 for a project total of \$149,509.80. The majority of the money will go towards the equipment and materials needed for student instruction.

Each of the 3 sites will receive:

One server- \$10,000 per server for a total of \$30,00

6 Android training devices at a cost of \$375 per device for a total of \$6,750

6 iOS (Apple) training devices at a cost of \$650 per device for a total of \$11,700

6 Windows training devices at a cost of \$300 per device for a total of \$5,400

Additionally, the Columbia and Lawrenceburg campuses will receive 12 Mac (Apple) computers each for necessary use with the iOS devices. These computers will cost \$3,000 each and there will be 12 computers per lab for a total of \$72,000. The Franklin campus will use the Williamson's Information Technology Center of Excellence at Centennial High School; a collaboration between the high school and Columbia State Community College that began this fall. The grand total for this section is \$95,850.00 not including the servers. To adhere to state rules, the \$30,000 for the servers is in the Capital Purchase line item.

Two faculty members will be trained by an outside company on how to create apps on the three systems. The \$8,000 cost will be covered by faculty support from the Columbia State Community College Foundation and will go towards the match amount.

The remainder of the \$5,591.80 required for the 10% match will come in the form of paid internships for Columbia State Students. Local businesses have agreed to pay these students during their internship class and their letters of support can be found in the Appendix. The Indirect Cost rate at 8% is \$10,068.

Section 5- Sustainability:

Once the grant period ends, the new academic program will be continued until it is deemed that web applications are no longer relevant in the technology industry, and is, therefore, not of benefit to the students of the college. The program will adhere to all of the college's policies regarding the curriculum and class scheduling, and aims to grow as student awareness about the program increases. The program faculty members will remain current on the technology advances in the web application field and will train any other necessary faculty members as the program grows.

The equipment and materials for the program purchased to establish the lab will be replaced using funds from the technology fees paid by students. This will occur every three to five years or as needed based on the individual equipment. Tuition will sustain the instructional program.

The college will continue to send students to the local businesses for the internship portion of the curriculum and work to build relationships with any new related companies that join the area or institute mobile applications in their business development plans. The various partners in this grant will maintain contact through local workforce meetings and through faculty and business meetings for the purpose of arranging internships.

Industry representatives will evolve into Advisory Committee members for the College's Information Systems Technology program to assure that the program meets the employment needs of the IT employees and the curriculum is up to date and relevant to the workforce. These advisory groups meet at least annually, have documented minutes of their meetings, and serve as the basis for program changes. Appendix D illustrates how this program will evolve into a sustainable program.