Maisha Jameson

om: Cynthia Correia <cyncorreia@gmail.com>
Sent: Monday, June 16, 2014 2:47 PM
To: Elnora Webb; Maisha Jameson
Subject: Pass Fund Grant - The FABLAB
Attachments: LaneyPASSFabLabProposal final.pdf; Laney_FabLab_budget_and_outcome_metrics.xls; LaneyPASSFabLab_Job_Descriptions.pdf

I am resending the Pass grant proposal today as Maisha said she had not gotten it yesterday.
Cynthia

Laney FabLab Project

Proposal: Peralta Accountability for Student Success Fund

June 15th 2014

Preparers:

Cynthia Correia, Laney Carpentry Dept Chair
Louis Quindlen, Laney Machine Tech Dept Chair
Danny Beesley, Digital Fabrication and Technology Consultant
Mark Martin, Deputy Sector Navigator for Advanced Manufacturing

Collaborators:

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Marisha Farnsworth, Merritt Landscape Horticulture Dept Faculty

The Third Industrial Revolution has arrived. FabLabs are the pre-eminent, educational vehicle ushering us into this new era of Advanced Manufacturing. They comprise the bedrock of educational reform that will catapult classrooms from teacher centered models of instruction into hubs of student directed learning that are accessible to previously underserved populations of students. In past models of education, there has been a distinct lack of equity for African-American and Latino students in terms of access to technological training and consequently to higher paying jobs. FabLabs and Maker-style learning tip the scales, bringing opportunities for the development of contextualized skills that enable students to thrive in this new industrial marketplace. Students who participate in FabLab based education gain access to higher education by employing complex problem solving, by cultivating the necessary skills to be effective in collaborative learning communities as per the Common Core State Standards, and by striving to create via the highest levels of thinking as illustrated in Bloom's Taxonomy of Learning. These new skills will help graduates to earn certificates, credentials, and higher degrees. By providing students with access to these higher levels of academic achievement in the classroom, Laney College becomes a leader in this movement.

The White House has heralded Maker Faires as a way to support President Obama's rallying cry for young people to be "makers of things and not just consumers of things." Furthermore, in a press release, the White House, in anticipation of hosting its own upcoming Maker Faire, expressed these sentiments in support of "making" as an educational vehicle for career advancement:

"By democratizing the tools and skills necessary to design and make just about anything, Maker Faires and similar events [FabLab Education] can inspire more people to become entrepreneurs and to pursue careers in design, advanced manufacturing, and the related fields of science, technology, engineering and mathematics (STEM). The Administration is already partnering with companies, non-profits, and communities to make the most of this emerging movement."

In response to this we, the skilled trades faculty and community of Laney College, propose the development and support of the Laney College FabLab. A FabLab is an educational powerhouse. It provides a fertile ground for research and is the ideal environment for implementing digital fabrication and all manners of computation through the use of technology, software, and various CNC (computer numerical controlled) machines such as 3D printers, table routers, desktop mills, laser cutters, scanners and a mix of hand and power tools. The FabLab serves as a platform for learning and innovation as a place to invent, make, and play, while promoting local entrepreneurship and industry employment.

With the Laney FabLab students are introduced to the technologies, tools and techniques that are behind this resurgence in manufacturing taking place across not only our nation, but the world. A FabLab creates an opportunity for students from both CTE and non-CTE programs to access new hands-on learning experiences. This not only benefits students, but also the community and helps to improve the local economy. Additionally, the establishment of the Laney FabLab solidifies the leading role that Laney has taken in the Bay Area manufacturing and skilled trades communities. Already many conversations about internships and labor employment opportunities have occurred with local businesses like BlueSprout, Hollis Works, and the Exploratorium Museum. Furthermore, outside manufacturers have approached our departments in the name of workforce training collaboration to discuss the ins and outs of how we train our students in the advanced manufacturing fields of construction, machining, wood technology, welding and others. These relationships, collaborations, internships, and employment opportunities will expose our students to different career options as well as to professional networking with innovative companies.

FabLabs are becoming more commonplace in K-12 schools. When they enter Laney College, students in these programs will be so well versed in the higher cognitive skills fostered in FabLabs, that they will be demanding to continue the high caliber of learning they are accustomed to experiencing. We envision the FabLab as an entry point for many students to become interested in our existing CTE programs, assisting to increase enrollment.

Training in the FabLab at Laney improves our students' chances for success in reaching their educational goals. Many universities are primarily concerned with research and do not provide substantial opportunities for authentic digital fabrication. Laney College is uniquely poised to become the exception: an educational institution whose inroads to the "maker" style of learning as well as collaborations with universities, research labs, and industry can deliver the challenges which students crave.

The FabLab can serve as an excellent resource for the reinvigoration of Adult Educational offerings within the PCCD as there are existing grants and other educational initiatives presently underway in Peralta to this end. Partnering with these existing programs and grants such as the Career Pathways Trust Grant which promotes among others, the fields of Engineering and Design/Advanced Manufacturing would mutually benefit both programs. The current momentum of educational reform in Peralta strongly lends itself to alignment with this FabLab proposal.

The FabLab will be lead by a Lab Coordinator, supported by a Lab Producer with oversight and input provided by the Carpentry, Wood Tech, Architecture, Machine Tech, Welding Tech Departments and the Dean of Career and Technical Education. This is a collaborative, high- tech Lab that will be open to all departments. The Coordinator will actively work to engage STEAM (Science Technology Engineering Art & Math) related departments and to identify opportunities for faculty to utilize the lab in order to enrich the educational experience of students.

The FabLab will be temporarily located in the theater workshop for 2 years. Existing equipment will begin to be moved into the theater this summer. Funds from VATEA Perkins and other grants have already been allocated to begin to build-out and equip the lab. Our long term vision sees us collaborating with the Laney administration, OUSD, the City of Oakland, Oakland Makers' Group, and other industry and community-based organizations to determine a permanent location that will be highly accessible to Laney students, K-12 students, and city residents. Our intention is to make this an accessible community resource.

Benefits of the FabLab:

- Excellent opportunity for Laney College students (Architecture, Carpentry, Machine Tech, and Wood Tech, etc.) to learn how to use the latest digital fabrication techniques in their chosen fields
- Serves as a local "Train-the-Trainer" location to teach Laney faculty, OUSD teachers, and others in the area about how to use FabLabs to further educational goals
- A bridge program to introduce students to hands-on CTE careers
- Solidifies Laney and Peralta as leaders in CTE training
- Serves as a platform for the implementation of Advanced Manufacturing technologies in the Community College curricula.

FabLab First Year

- Hire Lab Coordinator
- Hire Lab Producer
- Installation of FabLab and set-up of equipment
- Development of curriculum for proper lab use and safety
- Training of faculty on equipment and techniques
- Professional Development for Laney, K-12 faculty, and Lab staff

FabLab Second Year

- Offering short term courses for Laney & K-12 students
- Training of faculty in Lab safety and operation
- Continued curriculum development
- Open Labs for student use
- Ongoing Professional Development for faculty and Lab staff

FabLab Third Year

- Relocate Fablab and expand size on Laney campus
- Offering short-term courses for Laney & K-12 students and community

- Development of certificated programs
- Continued curriculum development
- Open Labs for student use
- Ongoing Professional Development for faculty and Lab staff

FabLab Fourth Year

- Offering short-term courses for Laney & K-12 students and community
- Offering long-term courses for Laney & K-12 students and community
- Continued development of certificated programs
- Continued curriculum development
- Open Labs for student use
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Jeffrey McGrew, Founder and Architect @ Because We Can/BlueSprout
Will Rollins, Digital Fabrication Manager @ USC School of Architecture
Nabih Tahan, CEO @ Cree USA
Claire Fischer, Principal @ Urban Promise Academy
Leroy Gaines, Principal, @ Acorn Woodland Elementay
Greg Howes, Co-Founder @ IDEAbuilder/CutMyTimber
Eric Dimond, Exhibit Developer/Project Director @ Exploratorium
Jeremy Liu, Managing Partner @ Creative Development Partners
Randolph Belle, VP, Community and Government Affairs @ Creative Development Partners
Monique LaCour, Teacher/Elementary Educational Blogger @Acorn Woodland Elementary
Timothy Bremner, Teacher/Director @ Castlemont High School/Sustainable Urban Design Academy
Margot Lederer Prado, Industrial Specialist @ City of Oakland

Laney FabLab Project
Proposal: Peralta Accountability for Student Success Fund
June 15th 2014

Job Description:
Lab Coordinator

The Lab Coordinator will oversee all aspects of the FabLab and will serve as the first point of contact for all FabLab related efforts at Laney College.

Duties include but are not limited to:

- Coordinate the purchase of all equipment and materials
- Work with faculty and Lab Producer to coordinate the lab set-up
- Represent Laney in the community for FabLab and Advanced Manufacturing events
- Manage and oversee all FabLab related activities
- Organize and develop the "Train the Trainer" program for Laney faculty and other schools and institutions
- Work with industry on identifying skill sets necessary for employment
- Work with industry to develop internships and other work experience opportunities
- Work with OUSD and other K-12 school districts in developing educational opportunities within the FabLab
- Work with OUSD and other K-12 schools to fundraise, establish, and install FabLabs on their respective campuses
- Do any reporting necessary from the grants
- Work with others on campus to seek the pursuit of new grants

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Job Description:
Lab Producer

The Lab Producer will be stationed in the Lab and will provide direct service to both faculty and students, working under the direction of the Lab Coordinator.

Duties include but are not limited to:

- Partner with the Lab Coordinator to design and set-up the lab
- Develop Lab workflow and safety procedures
- Identification and implementation of new innovative software and technology
- Materials research and procurement
- Work with faculty for curriculum development and instruction
- Teach "Train the Trainer" trainings
- Ascertain relevance and applicability of new technology for the FabLab
- Prototyping innovative technology in collaboration with faculty and students
- Staff Open Lab times
- Ensure that FabLab equipment is operational and maintained

Laney College: FabLab Proposed Budget and Outome Metrics

INPUTS					
	Year 1	Year 2	Year 3	Year 4	Year 5
Equipment	$ 160,000	$ 20,000	$ 15,000	$ 15,000	$ 15,000
Facilities Upgrade	$ 50,000	$ -	$ -	$ -	$ -
Lab Coordinator	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000
Lab Technician	$ 45,000	$ 45,000	$ 45,000	$ 45,000	$ 45,000
Materials and Maintenance	$ 30,000	$ 30,000	$ 30,000	$ 30,000	$ 30,000
Curriculum Development*	$ 15,000	$ 10,000	$ 5,000	$ 5,000	$ 5,000
Professional Development	$ 10,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000
Lab Relocation			$ 80,000		
TOTAL COSTS	**$ 360,000**	**$ 160,000**	**$ 230,000**	**$ 150,000**	**$ 150,000**
OUTPUTS					
Students Served	50	100	150	250	350
Faculty Trained	10	10	10	10	20
TOTALS					
Resources Leveraged					
Career Pathways Trust (pathway alignment)	$ 10,000	$ 10,000	$ 5,000		
TOTAL COSTS	**$ 10,000**	**$ 10,000**	**$ 5,000**	**$ -**	**$ -**

*Resources from the Career Pathways Trust grant may be used for pathway curriculum development.

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