DIGITAL FABRICATION CERTIFICATE PROGRAM

College: New York City College of Technology (CUNY)

Program Director: Yelena Melikian

Reviewer: Ronnie Parsons, Partner, Mode Lab

10/15/2014

The City University of New York was awarded $19.86 million through the United States Department of Labor's Trade Adjustment Assistance Community College and Career Training grant program to offer CUNY CareerPATH, a three-year program aimed at supporting adult students in career advancement and successful college transition, responding to local industry needs, and building CUNY's capacity to serve adult workers. CareerPATH provides academic and English language skills instruction "contextualized" to five industry sectors – health care, education, manufacturing, culinary arts and hospitality, and business – with the goal of engaging adult learners and accelerating their progress once they enroll in college. Strengthened connections between English language pre-college programs, occupational training, and degree programs — bolstered by strong advisement and enhanced student services — help students progress on each step of their education and career pathway. In the short term, participants earn industry-recognized credentials and find jobs. In the longer term, they translate their training into college credit and enter degree programs.

The program director/product liaison should enter the following information below:

- **Intended audience:** Architecture and design professionals interested in retooling/ramping up their skills in Digital Fabrication, and individuals (unemployed/underemployed) who have a working knowledge/work experience in digital design.
- **Product name and description:** Digital Fabrication Certificate Program in 3D Printing (90 hrs) and Subtractive Fabrication Process (Laser Cutting/CNC Milling – 90 hrs). Both Certificates have a 45-hr common core Module: 3D Modeling/Introduction to Fabrication
- **Intent of CareerPATH product:** to assist individuals upgrade their skills, learn to navigate their career advancement and transition to new careers in line with industry trends.

The reviewer should complete the information below:

Based on your expertise, how would you rate the product's ability to meet standards within your field?			
☒ **Outstanding**	☐ **Satisfactory**	☐ **Needs Improvement**	☐**Incomplete**

SUMMARY

Based on knowledge of the product, please summarize your review of the product below in 2-3 paragraphs.

In my assessment, the CUNY Digital Fabrication Certificate Program in Subtractive Fabrication Process successfully prepares students to develop proficiency in the construction of parametric rule-based design, subtractive fabrication techniques, and iterative design processes. This program will allow students with a working knowledge of digital design to improve/re-tool their skills.

The content contained in the curriculum is in-line with current industry trends and will be useful in achieving/transitioning to careers with a focus on 3D modeling and fabrication. Exposure to visual programming and parametric modeling software, coupled with hands-on milling and cutting provides a strong knowledge base for designing and fabricating material systems.

Additional References & Inspiration

Reading

- Grasshopper Primer, Version 3: http://modelab.is/grasshopper-primer/
- Pottman, Helmut. 2007. *Architectural Geometry*. Exton: Bentley Institute Press.
- Burry, Mark. 2011. *Scripting Cultures*: *Architectural Design and Programming*. West Sussex: Wiley.
- Menges, Achim & Ahlquist, Sean. 2011. *Computational Design Thinking*. West Sussex: Wiley

Videos

- Update Link for Grasshopper Tutorials: http://modelab.is/education/course-item/working-with-data-trees/
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Designers/Architects

- Tietz-Baccon, http://www.tietz-baccon.com
- Associated Fabrication, http://associatedfabrication.com
- Situ Studio, http://www.situstudio.com

Ronnie Parsons   10/17/2014