![CARROLL COMMUNITY COLLEGE]

COMPREHENSIVE ACADEMIC AFFAIRS PROGRAM REVIEW
EXECUTIVE SUMMARY
2023-2024

Program Title **Digital Design & Fabrication**	
Program Director/Coordinator **Scott Gore**	
Division **Business and Technology**	**Division Chair** **Robert Brown**

Type of Program

Transfer Degree:	**Terminal Degree:**
☐ Associate of Arts (A.A.)	☒ Associate of Applied Science (A.A.S.)
☐ Associate of Arts in Teaching (A.A.T.)	**Certificate:**
☐ Associate of Fine Arts (A.F.A.)	☒ Directed Technology Certificate
☐ Associate of Science (A.S.)	☐ New Certificate Program within an Existing Degree Area
☐ Associate of Science in Engineering (A.S.E.)	☐ New Stand -Alone Certificate

1. **Synopses of the significant findings**
   - The Digital Design & Fabrication program integrates design-object literacy, problem-solving strategies, entrepreneurship, and advanced manufacturing technology into an academic credit program that produces highly skilled graduates for the regional manufacturing workforce. In addition, the overall program review was found to be exemplary by the internal reviewers.

2. **Strengths of the program**
   - Unique academic program with statewide designation for in-state and out-of-county students to enroll at in-county tuition rates.
   - Strong faculty leading this program with numerous SOLIDWORKS Certifications, deep professional development, and active in art and design disciplines.
   - State-of-the-Art Fab Lab that provides real-world, hands-on experiences.
   - Strong student academic success, externally validated by high SOLIDWORKS certification pass rates.
   - Transcripted credit "bridge program" with Carroll County Public Schools (CCPS).

3. **Weaknesses of the program**
   - Lower enrollment than anticipated in an emergent technology field with strong job placement. As such, many courses are offered once a year, thereby challenging off-cycle students to complete the degree in four semesters.
   - Curriculum challenges include weak capstone portfolios at the end of the program and a need for more hands-on fabrication-based projects.

- Current Fab Lab size, associated classroom space, and current Fab Lab technology will be challenging for any future enrollment growth and long-term sustainability of the program.
- DFAB does not have a dedicated full-time Fab Lab Manager to maintain the current lab, troubleshoot hardware issues, or purchase IT equipment and supplies. Lab maintenance and purchasing are currently being handled by the Program Director and a part-time IT technician, which is inefficient and removes the Director from teaching assignments.

4. **Plans for Improvement including timeline**

The DFAB program listed seven administrative goals to be accomplished over the next five years. Please refer to these goals on page 78 of the program review. A high-level summary of these goals include:

- Increase enrollment in the program to at least five graduates every year and then maintain a minimum of 15 graduates every three years to continue to meet the Maryland Higher Education Commission's (MHEC) requirement.
- Market the SOLIDWORKS certifications to non-traditional students.
- Address the need for additional Fab Lab support personnel.
- Address the curriculum challenges of the Capstone Portfolio course.
- Investigate the feasibility of adding the SOLIDWORKS CSWAPA-DT (Drawing Tools) certification to DFAB-205 to better prepare students for the CSWA certification final exam.
- Investigate expanding and marketing current DFAB online and hybrid courses to offer courses to out-of-county and out-of-state residents, with the goal of increasing program enrollment.

5. **Identification of weaknesses or deficiencies from the previous review and the status of improvements implemented or accomplished**
- Course curriculum changes and programmatic revisions were undertaken to remove unnecessary prerequisite obstacles and strengthen programmatic currency within several courses.

6. **Budget/position requests (list the items and the costs)**
- Full-time Fab Lab technical support position to maintain the Fab Lab, diagnose technical issues, and support purchasing needs. Estimated cost: $60,000
- Fab Lab technology replacement and potential growth for the future. See the Technology Advisory Group (TAG) budget for allocated funds for technology in the current lab. The cost for additional or expanded lab space will depend upon several factors, including an estimate of future growth for expansion into bigger or newer lab spaces.

Signatures

_____Scott Gore_____   7/18/24_____
Program Director/Coordinator   Date
_____Rob Brown_____   7/18/2024_____
Division Chair   Date
*Sharon Brunner*_____   7/19/2024_____
Dean, Curriculum and Assessment   Date