
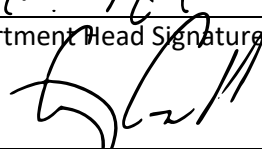


Cover page for Otilie Schillig Special Teaching Projects

Title of Proposed Project:		
Project Director (PD) Name:	PD Phone Number:	PD Email:
PD Department:	PD College:	Estimated # of Students Impacted each Semester:
Requested Amount from Schillig Funds (\$ 3,000.00 maximum):	Cost Share Amount (optional):	Total Amount for Project:
PD Signature: 		Date:
Department Head Signature (if cost share included): 		Date:
Co-PD Name:	Department:	Email Address:
Co-PD Name:	Department:	Email Address:
Co-PD Name:	Department:	Email Address:
Center for Teaching and Learning Use Only		
Date Received:	CTL Proposal Number:	File Location:

DIGITAL FABRICATION FOR ART AND DESIGN STUDENTS

Objective and Overview

The objective of this project is to build a practice of collaborative instruction between the Department of Art's concentration areas of Graphic Design and Fine Art-Sculpture centered on the field of *Digital Fabrication and Object Design*. Digital Fabrication is a broad term that entails the realization of 3D modeling or computing-aided design into dimensional objects using 3D printers and Computer Numerical Control machinery. For instructional capabilities in Art and Design to remain current, we feel this technology is critical in our shared curriculum. The resources acquired from this grant and matching funds will facilitate offering an ART 4990 Special Topics course in Digital Fabrication and Object Design for the 2024 Maymester, to be co-taught by the proposers. This project will directly impact the aforementioned course's anticipated enrolled students (12), while further impacting the total number of students enrolled in Sculpture and Graphic Design courses in a given academic year (180-200).

Motivation

Experience with Digital Fabrication and Object Design is necessary for students to exit our program qualified by industry standards. Digital Fabrication requires skillsets in computer software and digital design, as well as fabrication and material knowledge. For this reason, we feel the two areas of Graphic Design and Sculpture are uniquely qualified and suited to collaborate on this curriculum. Furthermore, each area already possesses aspects of the necessary resources for this course. In addition to rigorous training in digital design as part of the curriculum, the Graphic Design area maintains and operates a laser cutter, which is ideal for cutting and engraving materials like paper, fabric, and acrylic. Comparatively, the Sculpture area's course content consists of fabricating objects in wood, metal, concrete, among many other materials. Sculpture's recent addition of a CNC plasma cutter allows students to cut pre-designed shapes and components from sheet metal. Our proposal's budget allows for the addition of four 3D printers and one CNC milling machine, which would significantly expand potential and capabilities to include milling wood, foam, and various materials and printing prototypes and multiples of objects and products. While we recognize comparable resources are available to an extent within the college and university, we greatly value the impact housing these equipment items centrally in our facilities at Howell Hall will have on our students so they may gain consistent access and experience with the function, application, and management of these items.

Timeline

If approved, equipment will be acquired during the summer of 2023 and subsequently set up during the Fall 2023 semester. Initial testing and student utilization will take place in Spring of 2024, culminating in a comprehensive, intensive Maymester course offered to Fine Art and Graphic Design students. Long term, student workers in the Sculpture area will be trained to operate the equipment, making each process accessible to students outside of class time for independent experimentation and use.

Special Topics

With this support, the following Special Topics course will be taught collaboratively, with the intention to develop the content into formalized components of the Fine Art and Graphic Design Curriculum.

ART 4990 – Special Topics (Introduction to Digital Fabrication)

This course will provide introductory instruction in digital fabrication as it relates to object design, product design, and sculpture. We will cover 3D Modeling in Fusion 360, creating designs in Adobe Illustrator, laser cutting, 3D printing, CNC milling wood, and fabricating metal forms from CNC plasma cut components. Lectures will cover contemporary art and design utilizing digital fabrication. Assignments will prioritize creative/conceptual intent alongside technical development. Student choice-based learning will anticipate audience as either consumer or viewer to engage in graphic design, product design, and contemporary art making.



3D printed cuff bracelet by artist and interdisciplinary object designer Joshua Demonte, Smithsonian Collection.

Budget

Item	link	Cost	QT.	TOTAL
Makerbot (2 printer start up package)	https://store.makerbot.com/sketch-classroom	\$1,999.16	2	3,998.32
Mill Right Carve King	https://millrightcnc.com/product/millright-cnc-carve-king-kit-bundle/	\$1,438.00	1	1,438.00
Consumables for makerbots	https://store.makerbot.com/3d-printers-materials/sketch-spools/sketch-pla-single-spool-filament	\$54	5	270
Consumables for CNC milling	https://millrightcnc.com/product/mana-ams-288/	\$85	3	255
TOTAL	\$5,961.32

About the Proposers

Assistant Professor Caroline Hatfield’s research and teaching includes Sculpture and Installation Art. She has worked with a range of objects, mediums, and methods as a studio artist, museum professional, and wood and metal fabricator. Her current studio work includes both digital and traditional fabrication processes.

Associate Professor Claire Gipson’s research and teaching includes Product Development, Packaging Design, and Graphic Design. With a background in advertising, product development, and art-direction, she has worked on commercials, product packaging, catalogs, print ads, billboards, wall murals, home decor products, and everything in between.