Digital Craft/STEAM

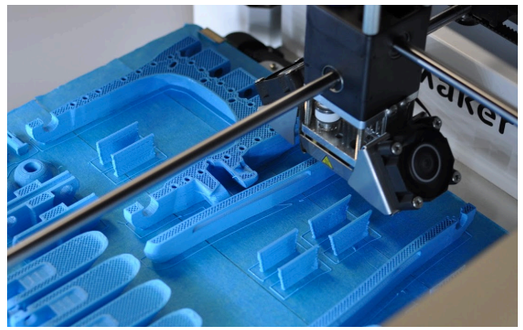
The Digital Craft Research Lab's goal is to foster innovative, creative research in the areas of design, craft, and art by combining advanced digital technology with traditional craft practice in an effort to educate students for the future. The DCRL fosters interdisciplinary design research, material research, and innovation through making. It is envisioned as a facilitator for partnerships between AppState researchers and regional businesses, local K-12 educators, nonprofits, arts organizations, other universities and schools.

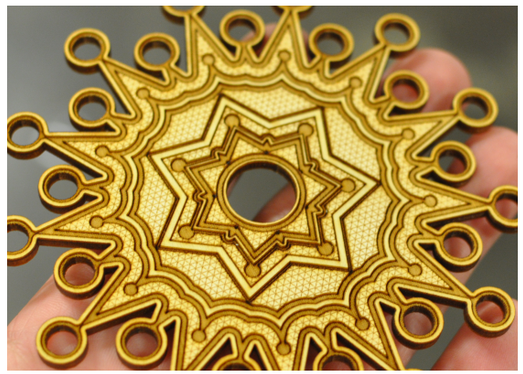
The summer Digital Craft/STEAM workshop series provides instruction to teachers, makers, artists, designers, and craftspeople and provides hands on access to the latest digital fabrication tools and processes that could be integrated into the classroom, personal creative research, and entrepreneurial endeavors.

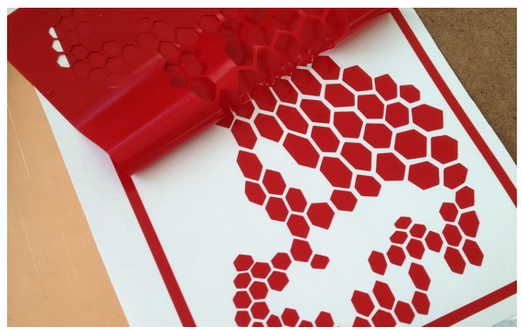
Create in The Mountains

Frankie Flood's Digital Craft Research Studio is nestled in the heart of North Carolina's high country in Boone, NC. The surrounding Blue Ridge Mountains attract outdoors enthusiasts year round. Boone's accolades include National Geographic Adventure magazine's "Best Places to Live and Play," Outside magazine's top 10 "Best Towns in America," and USA Today's "10 Great Small Towns with Huge Backyards." Sign up for some workshops and come visit so you can learn and create with us this summer.

SUMMER WORKSHOPS in DIGITAL CRAFT/ STEAM 2019







INFORMATION

FEES
Three-day workshop: $225
Four-day workshops: $300
One-week workshops: $525
Two-week workshop: $1050
Open DCRL studio sessions: $75/per day
Enroll early! Space is limited and workshops can fill quickly.

REGISTRATION
Payment is due in full at the time of registration. Payments will be accepted through PayPal and Venmo. Links to both will be attached to the registration form.

CANCELATIONS AND REFUNDS
If you need to cancel your registration for any reason prior to 45 days in advance of the first day of the workshop, there will be a $150 cancellation fee. If you cancel less than 45 days before the beginning to the workshop, there is no refund. Cancellations may be made by email at: ffloodworkshops@gmail.com

LEVELS & AGES
Although recommended levels are indicated, workshops are open to all levels. However, we do recommend that participants have basic computer skills.

COURSE MATERIALS
All materials and tools are provided for participants. Course materials will be provided, but if you have specific materials that you want to incorporate into your work, please feel free to bring them to the workshop.

LOCATION

LOCATION
Frankie Flood's personal studio (Digital Craft Research Lab); Boone, North Carolina

ACCOMODATIONS
https://bit.ly/2V9KtPl
https://bit.ly/2GQ1KsH
http://newriverescape.com

REQUIRED EQUIPMENT
Safety glasses, appropriate work clothing, personal laptop (optional)

FOR FURTHER INFORMATION
contact Frankie and Jill at:
email: ffloodworkshops@gmail.com
phone: 217-649-0438

DCRL
DIGITAL CRAFT RESEARCH LAB

SUMMER WORKSHOPS IN DIGITAL CRAFT/STEAM

SCHEDULE AND DESCRIPTIONS

June 3-6, (Mon-Thurs) 6-9:00pm

Intro to Digital Craft/Fabrication: Beginning 2D and 3D based CAD drawing

This workshop will cover the first steps in taking an idea from a sketch to a digital format that is ready to output on a laser cutter, 3D printer, or CNC machine. Workshop participants will learn how to utilize computer aided design software called Rhino3D to create designs. The workshop will focus on making the leap from sketchbook to digital to prepare an idea for digital fabrication. We will also discuss rendering software and photorealistic digital imaging. The course will also provide resources for open source and free modeling software resources for teaching and learning and an orientation to the Digital Craft Research Lab.

Student will create: 2D CAD drawings and a 3D CAD drawings that are suitable for digital output.

June 10-13, (Mon-Thurs) 6-9:00pm

Vinyl Cutting and Metal Etching

This workshop will cover how to output to a vinyl cutter and it's various applications in making stencils for metal etching, circuit board making, small and large scale stencil and graphics work, as well as build upon 3D modeling software and it's use to create the 2D drawings necessary to utilize the vinyl cutter. The course will also provide resources on types of vinyl and vinyl cutters, vinyl cutting software, and resources for teaching the application of the skill set taught.

Student will create: a vinyl stencil or design in vinyl as well as an etched aluminum sheet tile.

June 17-20, (Mon-Thurs) 6-9:00pm

Laser Cutting and Laser Engraving

This workshop will cover how to output to a laser cutter/engraver and it's various applications using different materials that can be cut or engraved. In this workshop participants will learn how to prepare 2D files for output, how to engrave materials how to cut materials (paper, fiber, wood and acrylic), etching photos, etching on stainless steel, and aluminum. The course will also provide resources on types and brands of laser cutter/engravers, laser cutting software, and resources for teaching the application of the skill set taught.

Students will create: a design for laser etching and cutting; build a simple laser cut and engraved box.

June 24-27, (Mon-Thurs) 6-9:00pm

3D Printing

This workshop will cover how to output 3D CAD designs to a 3D printer in the DCRL and the use of 3D printing service bureaus. Workshop participants will also have the opportunity to experience first hand use of a 3D printer as well as gain insight into the FDM and DLP printing processes and basic maintenance of a 3D printer. The course will also provide resources on types and brands of 3D printers, 3D printing and slicing software, information on building a 3D printer, and resources for teaching the application of the skill set taught.

Student will create: ring designs for 3D printing via service bureaus and will 3D print a vase in the DCRL.

July 1-3, (Mon-Wed) 6-9:00pm

3D Scanning and Photogrammetry

This workshop will cover 3D scanning and photogrammetry processes and how to output 3D scans to a laser cutter or 3D printer in the DCRL. The workshop will cover the use of Autodesk Slicer for Fusion software to create laser cut files from a 3D scan as well as discuss the various digital manufacturing processes using this free software from Autodesk. The course will also provide resources on other Autodesk software applications such as Meshmixer and Sculptris as well as provide resources for teaching the application of the skill set taught.

Student will create: a laser cut and 3D printed self-portrait bust.

July 8-19, (Mon-Fri) 9am-4pm

CNC Routing/Milling: Advanced 3D applications for Digital Craft/Fabrication

The following one week or two week workshops are intended for people who want to come live, play, and create in Boone this summer. Take the workshops separately or combine them for a more in-depth experience.

July 8-12, (Mon-Fri) 9am-4pm

2.5 axis CNC Routing/Milling: Advanced 3D applications for Digital Craft/Fabrication

This workshop will cover how to output 2D CAD designs to a 2.5 axis CNC router/milling machine in the DCRL. Workshop participants will also have the opportunity to experience first hand use of a CNC router and milling machine as well as gain insight into its basic maintenance and components. Learn basic 2.5 axis milling operations like profiling, pocketing, engraving, and facing. Workshop participants will create CNC engravings, and 2.5 axis metal parts for fabrication. The course will also provide resources on types and brands of CNC routers, CAD and CAM software and information on building a CNC router. Continue this work into the following week by taking the 3 axis course and expanding on your skills.

Student will create: CNC samples in foam, wood, and metal

July 15-19, (Mon-Fri) 9am-4pm

3 axis CNC Routing/Milling: Advanced 3D applications for Digital Craft/Fabrication

This workshop will cover how to output a 3D scan to a 3 axis CNC router/milling machine in the DCRL. Learn basic 3 axis milling operations like roughing, parallel finishing, and spiral finishing. We will also cover how to use these operations for unique surface texture on 3D surfaces. Workshop participants will create 3D milled forms in metal, generate 3D scans of themselves using the Sense scanner and carve a pink foam mold to produce plaster molds for wax casting. Participants will also have the opportunity to experience first hand use of a CNC router/milling machine as well as gain insight into the basic maintenance and components of a CNC router/milling machine. The course will also provide resources on types and brands of CNC routers/milling machines, CAD and CAM software and information on building a CNC router.

Student will create: CNC samples in foam, wood, and metal

July 20, (Sat) 9am-4pm
July 27, (Sat) 9am-4pm

Open Studio in the DCRLab

Guided studio time to work on projects of your choice. Make something new or finish a project started in an earlier workshop. This workshop gives you the opportunity to apply your skills on a special project of your choice and access equipment that you have been trained on in previous workshops. Bring your own materials. Enroll in three or more regular workshops and you may take one open studio at no cost.

SUMMER WORKSHOPS IN DIGITAL CRAFT

REGISTRATION INFORMATION

Payment is due in full at the time of registration. Payments will be accepted through PayPal and Venmo. Links to both will be attached to the registration form.

REGISTER

https://goo.gl/forms/4dWQV7J4tlj1OPEg2

PAYMENT METHOD

Payments will be accepted through PayPal and Venmo.

Workshop Instructor

Frankie Flood is an Associate Professor and Area Head of Jewelry and Metals at Appalachian State University. He is a graduate of the University of Illinois, where he received his MFA degree in Metalsmithing. Frankie completed a BA in Art Education and a MA in Metals at Eastern Illinois University in Charleston, Illinois.

Frankie Flood created the Digital Craft Research Lab in 2012 but has been researching methods for integrating digital fabrication technology with craft processes since he began teaching in higher education in 2005. He has currently relocated the Digital Craft Research Lab to Boone, NC and has integrated the lab into his personal studio where he conducts material and process research for the creation of one of a kind art objects.

www.frankieflood.com