# MINNEAPOLIS COLLEGE of ART and DESIGN

## **BACHELOR OF FINE ARTS: PRODUCT AND FURNITURE DESIGN**

This document highlights skills and tools that students in this major may develop proficiency in throughout their studies. This list serves only as an overview of skills and tools relevant to the major, and it may not reflect all applicable skills and abilities developed by each individual by the time of graduation.

### **SKILLS:**

- 3D Printing
- Adhesive Application
- Anthropometrics
- CAD/3D Modeling
- Carpentry
- CNC Machining
- Colors/Materials/Finishes
- Computer Rendering
- Conceptualization
- Digital Fabrication
- Electrical Wiring
- Epoxy Resins
- Ergonomics
- Ethnography/Design Research
- Fabrication (Plastic/Metal/Wood/Foam/Plaster/

Castables/Glass/Stone/Fiberglass/Carbon Fiber/Solid Surface/Textiles)

- Finishing Processes
- Form Development/Refinement
- Full-Scale Prototyping
- Gel Coats
- Hand/Digital Rendering
- Hand/Machine Shaping
- Haptics
- Human Factors/Ergonomics
- Injection Molding
- Installation/Deinstallation
- Kinetics
- Lighting Concepts
- Manual Design Drawing/Sketching
- Manufacturing Processes
- Metal Casting
- Metalworking
- MIG/TIG/Gas Welding
- Model Making
- Mold Making
- Pattern-Making/Sewing

- Plasma Cutting
- Presentation Techniques
- Product Photography
- Production Documentation
- Rapid Prototyping
- Sculptural Construction
- Sealing/Finishing
- Sewing
- Sheet Metal Forming
- Sketch Modeling
- Soft Sculpture
- Sound Design
- Staining/Painting
- Technical Drawing
- Traditional Construction
- Tube/Rod Cold Forming
- UI/UX Design
- Upholstery
- Vacuum Bagging
- Weaving
- Welding/Soldering
- Woodworking

#### PROGRAM-SPECIFIC SOFTWARE:

- After Effects
- AutoCAD
- Cut3D
- formZ Pro
- Illustrator
- InDesign
- Keyshot
- Photoshop
- Rhino 3D
- Solidworks
- VCarve Pro



#### **EQUIPMENT/MATERIALS:**

- 3D Laser Scanners/Cutters
- 3D Printers
- Articulating Mechanisms
- Cardboard/Foam-Core/Other Sheet/Board Materials
- CNC Machinery/Router Systems
- Electronics (Arduino)
- Fasteners
- Finishes
- Floor Machinery
- Foam
- Hand Tools
- Hot Wire Foam Cutter
- Industrial Ceramics
- Industrial/Consumer Sewing Machines
- Laser Cutter/Engraver
- Lathes/Mills
- Metals

- MIG/TIG/Gas Welders
- Modeling Compounds (Wax/Oil-Clay)
- Mold-making Materials
- Plastic Rapid Prototyper
- Plastics/Composites/Resins
- Pneumatic Spray Guns
- Power Tools
- Saws (Band/Table/Miter)
- Sergers
- Sheet Bender
- Straight Stitch Juki
- Textiles
- Thermoformer
- Wood/Composites
- Woodworking Tools (Hand/Power)

### **CAREER DEVELOPMENT RESOURCES:**

Opportunities for internships, full-time and part-time employment, and work studies are posted on Handshake. All current students and alumni have access to view and apply for these opportunities. New opportunities are posted frequently. Handshake also offers links to internship and employment resources, career development resources, and the option to submit your resume for critique and review. Students and/or alumni are welcome to contact Career Development for one-on-one employment assistance.

- Career and degree/major exploration
- Career development: resumes, cover letters, interviewing skills, professionalism, networking, and informational and mock interviews
- Internship preparation, application, and registration
- · Job and internship search strategies
- Job and internship listings and networking contacts
- Employer connections and mentorship

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