ABOUT US

The FabLab is changing the Innovation and Entrepreneurship (I&E) culture on the UHM campus. Students are enabled to create prototypes, work on multidisciplinary projects, do cutting-edge research, and form start-ups. The rapid-prototyping equipment and methodology has resulted in UH projects winning business plan competitions and innovation challenges. It also has served as a way to bring the community and local innovators together in awareness of what UH students are able to accomplish.

PROJECTS

• Wireless Prototyping Boards (REIS)
• Calibration Phantom for MRI (JABSOM)
• 3D Printed Robotics (ONR)
• Mars Rover (NASA Competition)
• Anti-Theft Devices
• Quadcopter
• Graphene RF Detectors (SPAWAR)
• Wireless Moisture Sensors
• Web Accessible Sensor Arrays
• IR Waveguide Pressure Sensors
• Autonomous Road Safety Devices
• High Accuracy Thermal Regulators
• Interactive Lighting Systems
• GPS Skateboard Speedometer
• Adaptive Optics (IFA)
• Solar Monitoring Systems
• Solar Panel Cleaning Robots
• Engineered Biomimicry
• Solar Powered Desalination Systems
• Unmanned Air Systems

EQUIPMENT

• PCB Milling Machine
• Photoresist Lithography
• Through-hole Electroplating
• Multilayer Press
• Reflow Oven
• Laser Cutter / Engraver
• Semiconductor Parameter Analyzer
• Micromanipulator
• Soldering Tools
• Dremel Power Tools
• Drill Press
• Dual Extrusion 3D Printer
• Mirror / Lens Polisher
• Surface Mount Pick-n-Place *
• CNC Mills *

* in process of acquisition
WHAT WE DO
A surge in student design projects and innovations has led to the need for a rapid-prototyping fabrication lab. Through various funding sources within the university and its partners, the UHM FabLab has acquired capabilities to construct and test electronic circuits, 3D print complex objects, and laser cut and engrave micro-scale devices. The FabLab is still growing as students continue to improve on fabrication techniques.

Located on the 4th floor of Holmes Hall, the FabLab is open daily to conduct research. Knowledgeable students aid each other in a collaborative work environment, learning industry practices that are vital within the professional engineering fields. The lab also hosts STEM related internship programs for high school students and college undergraduates.

“The FabLab encourages students to think creatively, as well as practically, in order to achieve innovations beyond the textbook.”

-T.V. Robertson
Graduate Student