BatLab Makerspace – STEAM

Student Learning Outcomes

Key Objectives - Student will be able to:

- Recognize key steps of the design process including possible redesign
- Utilize available resources to find potential projects
- Assess potential projects considering intended use
- Collaborate with peers, teachers and experts across disciplines
- Devise a plan for completing chosen project
- Choose technologies for design or construction appropriate to the planned project
- Solve design challenges using available resources
- Evaluate project results based on criteria of intended use
- Relate project results to peers and other interested parties
- Modify design and creation processes for application in different disciplines and situations
- Discuss interdisciplinary applications of the design and creation process

Learning Outcomes - Student will be able to:

- Apply principles of mathematics, science or engineering to problem-solving
- Design and conduct experiments, as well as analyze and interpret data or results
- Apply experimental results to improve processes
- Design a system, component or process to meet intended needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability and sustainability
- Function collegially within multidisciplinary teams
- Identify, modify and solve problems efficiently
- Communicate clearly
- Evaluate methodology and techniques for effectiveness and usability
- Interpret and understand appropriate technical literature
- Engage in self-directed improvement