

QUARTER: Summer Institute

INSTRUCTOR(s): Andrew Bruening, Troy Shampel,

SUBJECT(s): Additive Manufacturing

Problem Question: Identify, Design and Prototype an Assistive Device			
Project (or sub-question): Introduction; Tools, Techniques, Safety, Materials, Brainstorm	Project (or sub-question): Design and CAD	Project (or sub-question): Prototype and Build	Project (or sub-question): Final Assembly and Presentation of Learning
Week 1 Date: June 4-8 List Activities 1) Create teams; 2) Survey elders 3) create poster of processes 4) create poster for safety and materials Products: posters and propose assistive device	Week 2 Date: June 11-15 1) Mini challenge to design object and print 2) 3D print 3) Create Statement of Invention for proposed solution 4) CAD the solution Products: SOI and Prototype in CAD of solution	Week 3 Date: June 18-22 1) 3D Print product 2) Use Laser Cutter 3) Assembly of product parts 4) Organized 3D printing Products: SOI, Assembled Prototype and Evaluation for Modifications	Week 4 Date: June 25-29 1) Final assembly of prototype 2) Modifications 3) Poster of Solution and justification of modifications Products: Final Assembly and Presentation of Learning
Week 1 Date: Tues PD 1-4 Design & Plan modules Thurs Tours & discussion; Tours: Ortho & ROTO (health and Design uses of additive)	Week 2 Date: Tues PD 1-4 Design and Plan modules Thurs Tours & discussion; Tours: Sandvik (comparison with subtractive manufacturing)	Week 3 Date: Tues PD 1-4 Design and Plan modules Thurs Tours & discussion; Tours: OSU CDME & CSCC (collegiate programs)	Week 4 Date: Tues PD 1-4 Poster of Favorite Module with following Design Cycle Thurs Tours Exam; EXAM at PAST