

**IST-066**  
**Thinking with Your Hands: Making 3-dimensional Design and Production More Intuitive**

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**Abstract**

This project will develop 3D sketching tools and methods for design teaching with rapid prototyping techniques. The project deliverables include (a) a 3-D sketching interface to CAD/CAM production; (b) course and curriculum materials to introduce this technology into the design process; and (c) a Web site that documents goals and achievements of the project.

This project will also emphasize outreach to local and regional PA design firms, through formal and informal participation in design reviews, site visits, and guest lectures. Pennsylvania companies interested in gaining knowledge and experience with rapid manufacturing in AEC design will enjoy the opportunity to collaborate in exploring this technology. Students who participate in the project courses will gain hands-on experience with this design process, and will carry it into the workforce, thereby benefiting future employers.