

CECS Proposal No. 6

Beginning 2005-2006

Title: 3D CAD in Engineering

Unit Submitting Proposal: College of Engineering and Computer Science

Summary of the proposed project.

The Design Committee in Engineering met this semester to review the design sequence. The committee voted to separate the Freshman Design component from the Computer Aided Design component in ENGR 185. They also voted to switch from AutoCAD Light a 2D design package to SolidWorks, a 3D design package. The use of SolidWorks with SolidCAM, currently available in our machine shop, will enable students to draw and manufacture parts on the numerically controlled milling machine for other classes such as ENGR 247. Funds are requested to purchase SolidWorks

Project Goals and Objectives.

Goal – Implement SolidWorks 3D CAD in the freshman design.

Objectives – Upgrade from 2D to 3D CAD

Enable students to convert drawings for use in manufacturing parts on numerically controlled equipment in the design shop and rapid prototyping.

Impact – All engineering students take the design sequence from the freshman to senior year. This will impact ENGR 185, ENGR 247, ENGR 385, and ENGR 485.

This is a major change in the way students will do CAD and enable students to produce code using SolidCam so that they can make parts in the shop. They will use this feature in ENGR 247 to make trusses and in ENGR 385 and ENGR485 design projects.

Method for Achieving Goals

The software would be purchased as soon as possible to enable the faculty to become familiar with the software. We currently have one copy of the SolidWorks software and SolidCAM software in the shop.

Implement SolidWorks in the classroom in Fall 2005.

Evaluation Method

We will survey the students to measure their satisfaction with the students.

We will monitor the use of the software to manufacture parts in the design shop in ENGR 247.

The success of the project will be measured by the student performance in the freshman CAD class and ENGR 247.

Previous grant(s): N/A

Proposed location: Describe the proposed location of the equipment, software, etc.

The software license will be installed on the Engineering Server and will be available to all students

Requested Budget:

SolidWorks software – 300 seats - \$6,750
Installation – \$250
Shipping \$45

Summary of projected costs

Equipment (hardware and software) \$ 6,795*

* The price is to purchase the software not an annual license. Software upgrades will be required in the future but are not part of this proposal.

Complete the following items as appropriate

Installation \$ 250

Total project one-time costs \$ 7,045

Estimated recurring costs per year \$ 0

Identify the area(s) responsible for operating and maintaining the equipment.

CECS Technical Services

Approval by Dean or Vice Chancellor: _____

Individual responsible to complete proposal if funded: _____Ricky Horn, Ed McMahon_____

Priority established by Dean or Vice Chancellor: _____