



## SLO ARCHIVE

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### Student Learning Outcomes for CDI 62A

*SolidWorks (Advanced) - No longer offered*

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#### Team Members:

**Team Leader:**

Louis Gary Lamit (8627) in CDI

**Additional team members/notes about team:**

**Additional Notes:**

Other members:

1. Max Gilleland (x5578) CDI
  2. Paul Klingman (x8696) CDI
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#### Outcomes:

**Outcome 1 Phase I: Statement**

Functioning as a designer using SolidWorks, the student will create an engineering document package which complies with industry-defined standards and shall include the following: \* components modeled using CAD design tools \* assemblies generated from multiple components \* engineering drawings for components and assemblies

**Outcome 1 Phase II: Assessment Strategy Used:**

Assessment Quarter: Fall 2010

Assessors: Paul Klingman

Assessment Tools: • •

Sections being assessed: 01, Z

**Outcome 1 Phase III: Reflect & Enhance**

**Number of people involved in Phase III:** 30

**Changes:**

n/a

**Methods:**

Outcome 1: Assessment Planning [ edit ] Modified: [4/25/2011] Assessment Strategy Used: Quarter: Fall 2010 Assessors: Louis Gary Lamit • Paul Klingman Assessment Tools: Exams • Portfolios • Logs Sections being assessed: 01, 62Z Outcome 1: Reflect & Enhance [ edit ] Modified: [4/25/2011] Number of people involved in Phase III: 28 Changes: Methods: Assessment Tools: \*1 Student Design & Documentation Portfolio \*25 targeted modeling design projects which were assigned throughout the quarter \*7 Open-Book Quizzes Methods: Catalyst Course Management System was used to issue, receive, & grade assignments throughout the quarter. This was the second term in which Catalyst was used to manage CDI Dept. courses. Progress is being made across the department, and the course shell is proving to be a solid method of issuing course content, and collecting/archiving assignments & grades. \*Reading assignments covering 8 chapters of the current text are the foundation of the course content. \*25 projects of various size, scope, & complexity are assigned throughout the quarter. A zipped file containing all the data files required for reconstitution of the original model study remains in the Catalyst archive, available for detailed review at any time (even years later) after the student's submitted work. \*7 Open-Book quizzes (1 quiz at the completion of a chapter, excepting Chapter 1) are turned in & archived in the same fashion as with the projects. \*Final Student Documentation Portfolio (Adobe Acrobat pdf) is used to collate and document all course work into a visual image format, easily accessible to non-technical viewers.

### **Findings and Conclusions:**

Over 50% of the students in this section completed all of the work, with about 90% excellence (completion of 90+% of all assigned course work) within the section. This is an unusually high success rate, which likely is attributed to the fact that a larger-than-usual number of students either dropped or withdrew before "it was too late". True to form, those students who did stay managed to satisfactorily finish all assigned work prior to the end of the course. The general trend in the class was that the typical student would excel at the work (s)he attempted. Work assigned early in the quarter is usually done well, leaving work assigned much later in the quarter incomplete in a few cases. Another key item is that students at this level have been "distilled", such that only motivated students would elect to take this class. This manifests itself by the high average & median scores, with relatively few unsatisfactory grades. Another indication is that there are two distinct groups of students with respect to grades: either the student scores over 90% or under 50%, which could be evidence of the student's prior training or lack of same. Regarding the rather high (40%) dropout rate: A significant percentage of students enroll in this class without any real understanding as to how complex & advanced the subject matter is. This comes clear the first week or two, and there is a bit of an exodus. However, after the initial reality check, retention is good, above 90%. During this quarter, however, an additional factor is likely in play. The recorded lectures are an integral part of the course, whether taken at a distance or on campus. There were a number of technical difficulties encountered with the recording equipment & software during Fall Quarter, which corrupted a few of the lectures for this particular course. No doubt this had a deleterious effect on a few students' learning experiences, prompting those students "on the bubble" to drop or withdraw. The instructor has launched a concerted effort at updating/upgrading the quality & timeliness of the recorded lectures, such that those vulnerable students "on the bubble" may find the going easy enough to persevere to the end. 28 students completed the class and received a grade. Activity Report: \*14 students received a grade of 90+% (82% of class) \*1 students received a grade of 80-90% (6% of class) \*2 students are under -Incomplete status (12% of class)

**Enhancement (Planned Actions)****Part I:**

Continue to enhance & upgrade the recorded lectures on a regular basis. The instructor is gaining some level of expertise at recording the lectures in front of a 'studio audience', thus keeping the dynamic nature of a live lecture in the recorded file. Add a couple of on-line mid-term exams to the assessment tools. This will gage the student's knowledge of the subject matter best demonstrated outside of a practical exercise. There is enough raw data to generate a 'scantron-type' of quiz or exam, which would have the added effect of testing the student's command of the few absolute facts in this field which must be 'known cold'.

**Part II:**

n/a

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