FACULTY **C**OURSE **A**SSESSMENT **R**EPORT

Department of Biomedical Engineering

Academic Year: **2012-2013**
Term: **Spring 2013**

Course Code and Title: **BME60C Engineering Analysis/Design: Computer-Aided Design**

Instructor: **Samir Shreim, PhD**

Background: Please review the *Accreditation background* document.

Instructions: For each student outcome performance indicator, identify (1) the assignment (which quiz, quiz problem, exam problem, or project) was used to assess that indicator, (2) the maximum score possible on that assignment, (3) the performance standard for that assignment expressed in points and also as a percentage of max, (4) the number of students who were assessed on that assignment, (5) the average score achieved by them expressed in points and percentage of max, and (6) the number and percentage of BME students who achieved the performance standard.

Performance Indicators (PIs): This course assesses the following Performance Indicators (please consult the *Proposed Remapping of BME courses to Student Outcomes* document): **c1**, **k3.**

c1 — Students can design a biomedical system to meet desired needs within realistic constraints.
k3 — Students are proficient in using computer-aided design tools for biomedical applications.

PIs	Assignment used for assessment	Max. score	PI standard and % of maximum	Number of students tested	Average score and % of maximum	Number and % of BME students who met the standard
(c1)	Design Project Phase I	110	83 (75)	50	88 (80)	34 (68)
	Design Project Phase II	165	124 (75)	50	130 (79)	37 (74)
	Final Exam Q5	65	48 (75)	50	45 (70)	31 (69)
	Average:				**(76)**	**(70)**
(k3)	HWI	10	8 (80)	50	8 (80)	43 (86)
	HWII	10	8 (80)	50	9 (90)	49 (98)
	HWIII	10	8 (80)	50	9 (90)	42 (84)
	Final Exam Q1-4	75	57 (75)	50	60 (80)	37 (74)
	Average:				**(85)**	**(86)**

Course Learning Outcomes: This course assesses the following Course Learning Outcomes (please consult your *Course Outline* document):

CLO1: Students will be able to model mechanical parts in SolidWorks **(c, k)**.
CLO2: Students will be able to read a mechanical drawing **(c, k)**.
CLO3: Students will be able to generate a mechanical drawing **(c, k).**
CLO4: Students will be able to model mechanical assemblies in SolidWorks **(c, k).**
CLO5: Students will be able to read an assembly drawing **(c, k).**
CLO6: Students will be able to generate an assembly drawing **(c, k).**

CLOs	Assignment used for assessment	Performance standard	Number of students tested	Average score (%)	Number and % of BME students who met the standard
1	HWI, HWII, HWIII, Final Exam	75%	50	78	**35 (70)**
2	HWI, HWII, HWIII, Final Exam	75%	50	78	**35 (70)**
3	Design Project Phase II, Final Exam	75%	50	77	**36 (72)**
4	HWIII, Design Project Phase II, Final Exam	75%	50	77	**36 (72)**
5	HWIII	80%	50	80	**34 (68)**
6	Design Project Phase II, Final Exam	75%	50	77	**36 (78)**

What changes did you make in this course based on previous assessment results?

N/A First class offering.

What recommendations do you have for improving the course the next time it is taught?

More focus on individual assignments
More time spent on mechanical drawing aspects

What recommendations do you have, if any, regarding prerequisite courses or other ways to improve student preparation for this course?

None

Any other recommendations or comments?

Junior level classes (e.g. BME 110A, 110B) can reinforce the concepts taught in this course by incorporating mechanical design components in group/term projects.