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

Department of Biomedical Engineering

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

Course Code and Title: **BME60B Engineering Analysis and Design: Data Analysis**

Instructor: **Bernard Choi, PhD**

Background: Please review the *ABET 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): **a2, e2, k2.**

a2 — Students can apply knowledge of science to problems in Biomedical Engineering.
e2 — Students can develop a solution to biomedical engineering problems
k2 — Use software tools to model biomedical systems, and analyze and interpret biomedical data.

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
(a2)	Assignment #2	100	75 (75%)	43	79.42 (79.42%)	36 (81.82%)
(e2)	Term project	100	75 (75%)	43	86.47 (86.47%)	40 (90.91%)
(k2)	Assignment #4	100	75 (75%)	43	73.95 (73.95%)	34 (77.27%)
	Term project	100	75 (75%)	43	86.47 (86.47%)	40 (90.91%)
	Average:				**(80.21%)**	**37 (86.05%)**

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

CLO1: Learn the fundamentals of MATLAB programming **(a,k)**.
CLO2: Learn how to use MATLAB to analyze biomedical data sets **(a,k)**.
CLO3: Learn how to use MATLAB toolboxes to solve partial differential equations related to circuits, mechanics, and transport **(a,e,k)**.

CLOs	Assignment used for assessment	Performance standard	Number of students tested	Average score (%)	Number and % of BME students who met the standard
1	Assignments #2 and #4, Term project	75%	43	79.95%	36.67 (85.27%)
2	Assignments #2 and #4	75%	43	76.69%	35 (81.40%)
3	Assignment #2	75%	43	79.42%	36 (81.82%)

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

N/A – first offering of class

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

Introduce lecture on academic dishonesty, with specific examples related to course material
Focus more on MATLAB programming fundamentals/constructs, at the beginning of class
Flip the classroom – this worked quite well for the partial-differential equation-solving component of the class
Provide more checkpoints for term projects
Find a good textbook to use as a reference for the class

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

N/A

Any other recommendations or comments?

No