FACULTY COURSE ASSESSMENT REPORT

Department of Biomedical Engineering

Academic Year: **2011-2012**
Term: **Spring 2012**

Course Code and Title: **BME170 Biomedical Engineering Laboratory**

Instructor: **Enrico Gratton, PhD; Zoran Nenadic, DSc; Fan Gang Zeng, PhD; Gultekin Gulsen, 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): **b1, b2, b3, f2, g2, k1, k2.**
b1 — Students can design biomedically relevant experiments.
b2 — Students can conduct biomedically relevant experiments.
b3 — Students can analyze and interpret data from biomedically relevant experiments (including living systems).
f2 — Students understand professional and ethical responsibility specific to health-related fields
g2 — Students can communicate in writing technical issues related to biomedical engineering.
k1 — Students can collect data from biomedical systems.
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
(b1)	Lab A report	15	**10 (67%)**	75	12.7 (84.66%)	66 (88.0%)
	Lab B report	15		75	13.65 (91.00%)	67 (90.6%)
	Lab C report	15		75	11.59 (77.26%)	66 (88.0%)
	Lab D report	15		75	13.50 (90.00%)	68 (92.0%)
	Average:				**(85.73%)**	**67 (89.7%)**
(b2)	Lab A report	15	**10 (67%)**	75	12.7 (84.66%)	66 (88.0%)
	Lab B report	15		75	13.65 (91.00%)	67 (90.6%)
	Lab C report	15		75	11.59 (77.26%)	66 (88.0%)
	Lab D report	15		75	13.50 (90.00%)	68 (92.0%)
	Average:				**(85.73%)**	**67 (89.7%)**
(b3)	Lab A report	15	**10 (67%)**	75	12.7 (84.66%)	66 (88.0%)
	Lab B report	15		75	13.65 (91.00%)	67 (90.6%)
	Lab C report	15		75	11.59 (77.26%)	66 (88.0%)
	Lab D report	15		75	13.50 (90.00%)	68 (92.0%)
	Average:				**(85.73%)**	**67 (89.7%)**
(f2)	HIPAA Research Tutorial	Pass	Pass	75	NA	62 (82.67%)
	Human Research Tutorial	Pass	Pass	75	NA	62 (82.67%)
	Average:					**62 (82.67%)**

	Assignment		Performance	Number	Average score (%)	Number and %
(g2)	Lab A report	15	10 (67%)	75	12.7 (84.66%)	66 (88.0%)
	Lab B report	15		75	13.65 (91.00%)	67 (90.6%)
	Lab C report	15		75	11.59 (77.26%)	66 (88.0%)
	Lab D report	15		75	13.50 (90.00%)	68 (92.0%)
	Average:				**(85.73%)**	**67 (89.7%)**
(k1)	Lab A report	15	10 (67%)	75	12.7 (84.66%)	66 (88.0%)
	Lab B report	15		75	13.65 (91.00%)	67 (90.6%)
	Lab C report	15		75	11.59 (77.26%)	66 (88.0%)
	Lab D report	15		75	13.50 (90.00%)	68 (92.0%)
	Average:				**(85.73%)**	**67 (89.7%)**
(k2)	Lab A report	15	10 (67%)	75	12.7 (84.66%)	66 (88.0%)
	Lab B report	15		75	13.65 (91.00%)	67 (90.6%)
	Lab C report	15		75	11.59 (77.26%)	66 (88.0%)
	Lab D report	15		75	13.50 (90.00%)	68 (92.0%)
	Average:				**(85.73%)**	**67 (89.7%)**

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

CLO1: Design and perform experiments involving biological tissues. **(b,k)**
CLO2: Describe the approval process involved in human subject studies. **(f)**
CLO3: Collect, analyze and interpret data collected. **(b,k)**
CLO4: Write comprehensive experimental reports. **(g)**

CLO	Assignment used for assessment	Performance standard	Number of students tested	Average score (%)	Number and % of BME students who met the standard
1	Lab-A, Lab-B, Lab-C, Lab-D	67%	75	12.86 (85.7%)	67 (89.7%)
2	HIPAA Tutorial	Pass	75	NA	62 (82.7%)
	Human Research Tutorials	Pass	75	NA	62 (82.7%)
3	Lab-A, Lab-B, Lab-C, Lab-D	67%	75	12.86 (85.7%)	67 (89.7%)
4	Lab-A, Lab-B, Lab-C, Lab-D	67%	75	12.86 (85.7%)	67 (89.7%)

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

No Changes

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

No Changes

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

No chnages

Any other recommendations or comments?