CALIFORNIA STATE UNIVERSITY
EAST BAY

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2014-2015 CSCI EETF Assessment Year End Report, 2015

Program Name(s)	EETF Faculty Rep	Department Chair
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A. Program Student Learning Outcomes

The Student Learning Outcomes :

a) understand and implement risk management, scheduling and estimating, building information modeling, high performance building assessment systems, and project delivery methods.
b) use effective communication skills to solve practical construction problems, explain and defend the application of advanced construction practices associated with planning, staffing, scheduling and controlling construction projects.
c) plan and deliver a project meeting the desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, constructability, and sustainability.

B. Program Student Learning Outcome(s) Assessed

SLO a - understand and implement risk management, scheduling and estimating, building information modeling, high performance building assessment systems, and project delivery methods.

C. Summary of Assessment Process

The SLO was evaluated using the Monte Carlo simulation problem in Part II of the midterm. This question was specifically focused on the fundamentals of implementing a risk analysis tool such as Monte Carlo simulation.

Problem 1. A Simple Monte Carlo Simulation.
The plot shown below represents the probability distribution of risks:

a) Based on the histogram of the risks shown below, complete the probability table below and draw the cumulative risk curves for A and B , respectively

b) Assuming that the cost impact of the project can be calculated as the sum of risks A and B (Impact = A+B), use the cumulative risk curves calculated in part a) to calculate the cost impact of risk A and B on the project. Complete the table shown below using the 4 randomly generated numbers shown in the table below

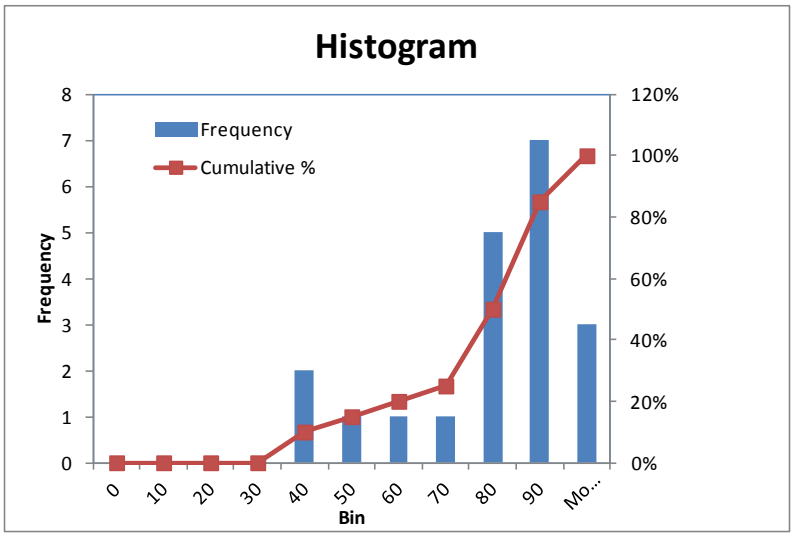
c) Draw the histogram associated to the results calculated in (b)

d) Based only on this analysis and disregarding the fact that only 4 cases were used. What is the probability that the cost of the project is equal or below $40 MM?

D. Summary of Assessment Results

Outcome a) Understand and implement risk management, scheduling and estimating, building information modeling, high performance building assessment systems, and project delivery methods.

Indicator: Problem 1 of the midterm was answered by 20 students. The average score was 76.3%. The histogram including all scores in shown below.



E. Suggestions and Recommendations for the CSCI EETF in the Future

Reinforce the concepts of Monte Carlo Simulation by assigning students a homework.