

## Assignment 3

Steve Mazza

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1. (a)

$$\begin{aligned}\text{Effort} &= 0.254 \times 500^{1.06} \times 0.8 \\ &= 0.254 \times 725.95 \times 0.8 \\ &= 184.39 \times 0.8 \\ &= 147.51 \text{ person-months}\end{aligned}$$

$$\begin{aligned}\text{Schedule} &= 1.5 \times 147.51^{0.33} \\ &= 1.5 \times 5.20 \\ &= 7.79 \text{ months}\end{aligned}$$

$$\begin{aligned}\text{Staff} &= \frac{147.51}{7.79} \\ &= 18.94 \text{ people}\end{aligned}$$

(b)

Activities	Effort %	Effort	Staff
Acquisition and Supply	7%	10.33	1.33
Technical Management	17%	25.08	3.22
System Design	30%	44.25	5.68
Product Realization	15%	22.13	2.84
Product Evaluation	31%	45.73	5.87

2. Using a labor cost of \$10,000/Person-Month and the spreadsheet named academicCOSYSMO\_2.0.xls, I project the total labor to be 192.4 systems engineering person months for a total estimated cost of \$1,924,000.00.
3. The three multiplicative cost drivers in COSYSMO that account for the largest variation in productivity in order are *Requirements Understanding*, *Level of Service Requirements*, and *Technology Risk*. For one (1) nominal requirement, *Requirements Understanding* has a productivity range of 0.2 - 0.5. *Level of Service Requirements* has a productivity range of 0.2 - 0.4. *Technology Risk* has a productivity range of 0.7 - 1.74.

4. Changing *Migration Complexity* from High to Nominal results in a 1.785% change in systems engineering effort.