Errata for Third Edition, First Printing

Page 253, figure 7.16. The “actual performance” on the figure does not match the text. The text is correct and the figure is wrong.

Page 260, problem 7.3: Parts (b) and (c) should read

(b) If the volume of bearings is 1/2 that of bushings, what is the bottleneck of the PM line?

(c) If the volume of bearings is 1/3 that of bushings, what is the bottleneck of the PM line?

Page 336, line 10 (second equation) currently reads,

$$C_c = \sum_k C(k) \left[1 - \frac{Dt_0^*}{\mathrm{NWP}(k)} \right]$$

and should be

$$C_c = \sum_k C(k) \left[1 - \frac{Dt_0^*/Q_t}{\mathrm{NWP}(k)} \right]$$

Page 337, line 16 currently reads,

$$\begin{aligned} E_T &= \frac{\sum_i D(i) \cdot \mathrm{CT}(i)/T_0^*(i)}{\sum_i D(i)} - 1 \\ &= \frac{\sum_i W(i)/T_0^*(i)}{\sum_i D(i)} - 1 \end{aligned}$$

and should be

$$\begin{aligned} E_T &= \frac{\sum_i D(i) \cdot \mathrm{CT}(i)/T_0^*(i)}{\sum_i D(i)} \\ &= \frac{\sum_i W(i)/T_0^*(i)}{\sum_i D(i)} \end{aligned}$$

Page 351, problem 1 should be:

Consider a line that makes two different astronomical digital cameras. The TS-7 costs $2,000 while the TS-8, which uses a much larger chip, costs $7,000. Most of the cost of the cameras is due to the cost of the chip. In manufacturing, both go through the same three steps but take different amounts of time. The capacities for the TS-7 are seven, five, and six per day at workstations 1, 2, and 3, respectively (that is, if we run exclusively TS-7 product). Similarly, capacity for the TS-8 is six per day at all stations (again, assuming we run only TS-8). Five percent of TS-8 units must be reworked, which requires them to go back through all three stations a second time (process times are the same as those for the first pass). Reworked jobs never make a third pass through the line. There is no rework for the TS-7. Demand is three per day for the TS-7 and one per day for the TS-8. The average inventory level of chips is 20 for the TS-7 and five for the TS-8. Cycle time for both cameras is four days, while the raw process time with no detractors is one-half a day. Cameras are made to stock and sold from finished goods inventory. Average finished goods inventory is four units of the TS-7 and one unit of the TS-8, while the average backorder level is 0.29 for TS-7 and 0.12 for TS-8.

(a) Compute throughput TH(i) for each station for each product.

(b) Compute utilization $u(i)$ at each station.

(c) Using dollars as the aggregate measure, compute RMI, WIP, and FGI.

(d) Compute the efficiencies E_c, E_I, and E_T.

(e) Suppose the machine at workstation 1 costs $1 million and the machines at the second and third workstations cost $10,000 each. Compute C_c and contrast with E_c computed above.

Page 352, Problem 6 should have no part (e).

Page 354, Problem 15, last line currently reads, “Check to see if the cycle times …”should read, “Compute the average cycle time for each.”

Page 354, Problem 16, parts (d) and (e) currently reads, “What is the range of cycle time …” and should read “What is the average of the cycle time …”

Page 381, problem 10.1, part (a): “0.9 parts per hour” should read “0.9 parts per minute”

Page 550, problem 13 should be deleted.

Page 552, problem 8 should be replaced with

Consider a CONWIP line composed of several workstations. The effective production rate for the line is 100 units per day and the minimum practical lead time is nine days. Currently there are 450 units of finished goods and 775 in WIP including 95 units ready to go into finished goods on the first day, 95 on the second, and 100 on the third, 35 on the fourth, and 90 units ready to come out in each of the next five days. The demand for the line is given in the table below.

Day from Start	Amount Due
1	80
2	80
3	80
4	80
5	80
6	90
7	145
8	170
9	180
10	190
11	190
12	150
13	90
14	80
15	80

a Can all of this demand be met on time assuming the given production rate and minimum practical lead time?

b How should the work be started to minimize inventory and make sure everything is on time? (Hint: work the problem from the last demand to the first keeping track of the minimum inventory needed to meet demand.)