Nov. 2, 2026

Assignment 3: Options on Qualitative and Quantitative Decision Making; Due: Nov. 9, 2026

Exercise 3.1. This is for those of you who may find the mathematical methods in decision making that we are discussing less interesting or tractable than the more qualitative decision making strategies that one might exercise in an organization. A chapter on the differences between conventional and sustainable organization behavior can be found on our Slack space in Week3-DMRM channel. Select some of the questions at the end of the chapter to answer and provide your own experience and insights into the material presented in this chapter.

Exercise 3.2. For those of you that want to continue to analyze decisions and risk management using probability distribution functions you are to take the SysML design presented in class this week and update that model with decisions on selecting digital modulation schemes and parameters as discussed in class.

References

[1] C.H. Botts. Bayesian statistics: An introduction for the practicing reliability engineer. *Johns Hopkins APL Technical Digest*, 28(1):1–9, 2025.

[2] R.L. Keeney. Feature article - decision analysis: An overview. *Operations Research*, 30(5):803–838, 1982. URL https://doi.org/10.1287/opre.30.5.803.

[3] Sergios Theodoridis. *Machine Learning: A Bayesian and Optimization Perspective*. Elsevier, 2015. ISBN 978-0-12-8015522-3.