



Center for Curriculum Redesign
**Professional Development in
Bayesian & Conditional Probability**

Module Content

Unit 1: Building Bayesian Reasoning

- 1.1 - Formalizing Terminology & Notation
- 1.2 - Conditional Probability
- 1.3 - Bayesian Probability
- 1.4 - Bayesian Thinking & Risk

Unit 2: Applications of Bayesian Reasoning

- 2.1 - Medical Testing
- 2.2 - Paradoxes & More Hypotheses
- 2.3 - Bayesian Thinking & Decision-Making

Module Time: 40 hours*

Module Project: Using Bayes to Enhance Spam Filters

Core Concepts in This Module

- Uncertainty
- Conventions
- Simplicity & Elegance
- Numbers & Quantity
- Systematic Approach
- Comparison
- Accurate Enough?

Competencies in This Module

- Critical Thinking
- Communication
- Growth Mindset

*Total module time of 40 hours includes both independent learning/asynchronous (~85%) and synchronous (~15%)