

1135-M5-1890 **Suzanne I Dorée*** (doree@augsborg.edu), Augsburg University, 2211 Riverside Avenue, Minneapolis, MN 55454. *An Inquiry-Based Learning Course in Discrete Mathematics (for mathematics majors, computer science majors, and future teachers)*.

How do we teach students to think mathematically? Almost twenty years ago I began teaching a Discrete Mathematical Structures course that simultaneously prepares computer science majors for advanced coursework, meets pre-service teaching standards for middle/high school mathematics, and gives mathematics majors experience writing proofs. Over the years I have moved the course to include more and more active, inquiry-based learning to help students to develop their inner mathematician. Students explore mathematical concepts, check examples, make organized lists, develop conjectures, build counterexamples, and write both careful informal explanations and formal proofs. Plus it is fun. In this talk I will describe the pedagogy and whet your appetite with a couple of particularly effective examples showing how we approach the content. Our findings include increased participation in the mathematics major or minor, continued question-posing and inquiry in subsequent coursework, and improved readiness for undergraduate research. Course materials are being class-tested – and more volunteers needed! (Received September 25, 2017)