

Modeling Our World with Mathematics: Incorporating Math Modeling into a General Education Curriculum

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In recent years, we have been increasing the number of “non-traditional” mathematics courses offered in our general education curriculum at Lewis University. Most recently we added a 100-level quantitative literacy and mathematical modeling course that counts for both mathematics and civic engagement credit. In this course, the emphasis is on improving students’ quantitative literacy skills and providing firsthand experience with how mathematics can help us understand applications and make informed decisions. We also introduce students to the process of model construction and demonstrate the role assumptions play in model outcomes and data visualizations. Topics covered have included data visualization dos and don’ts, verbal data communication strategies, voting techniques, gerrymandering, racial profiling, minimum wage, tax brackets, scheduling problems, disease models, and predator/prey models. In this talk, I will share lessons I learned in the development and initial implementation of this course.