

Robert Mayes IS1: Assessment of modeling skills

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QUBES is an NSF funded project providing resources and support for teaching quantitative reasoning in undergraduate biology courses. As part of this project we have developed and piloted an assessment of quantitative biology reasoning. We will present findings on the current state of QR in biology courses and discuss the development and revision of the assessment. The QM BUGS assessment measures students' proficiency in quantitative modeling (QM - ability to develop a model). The assessment is intended to be given in undergraduate biology courses where quantitative skills are preparing students or actively engaging students in quantitative modeling within biological contexts. Assessment consists of 30 questions: 19 multiple choice questions (5 options) addressing quantitative modeling understanding and 11 Lickert questions (1 NA, 2 Strong Disagree to 5 Strongly Agree) addressing student confidence about modeling in biology.