

1135-97-2996 **Nathan Tintle*** (nathan.tintle@dordt.edu), Department of Mathematics and Statistics, 498
4th Ave NE, Sioux Center, IA 51250. *A conceptual approach to financial mathematics.*

Financial mathematics courses often get lost in a sea of technical notation, formulas and nuanced financial and mathematical details, causing students to lose sight of overarching mathematical and financial concepts. In this talk, I will describe our recent efforts to develop a radically different approach to teaching financial mathematics. This new approach (1) Develops financial mathematics thinking by re-ordering the typical content to embrace a spiral approach to learning, (2) Uses real financial data, big data contexts and case studies, (3) Stresses conceptual understanding, rather than mere knowledge of procedures, (4) Fosters active learning in the classroom through hands-on simulations and case studies, (5) Uses technology for developing conceptual understanding and, (6) Uses assessments to improve and evaluate student learning. We have implemented this course as part of our actuarial preparation program for students during their freshman year, with other students take the course to meet general quantitative reasoning requirements at the college. We will also describe efforts to develop an assessment tool to use in financial mathematics courses to better capture what students know and don't know, before and after financial mathematics courses. (Received September 26, 2017)