Senior Capstone Project: History of Mathematics Course (MTH 3000)

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**Abstract**

My goal is to fully design (and perhaps implement) a History of Mathematics course here at the University of Cincinnati. This course is intended to be taken by students who are studying to receive a Bachelor’s of Arts or Science in Mathematics, a minor in Mathematics, or students who are in the duel program studying Mathematics and secondary education. The academic goal for this course is to give students a deep understanding of the origin of many mathematical concepts, principles, and famous theorems that have been at the student’s disposal since their career in mathematics began. This course will have a focus on the origin of abstract mathematics, geometry, complex computation, logic, infinity (infinite and countably infinite sets) and methods of proof writing. My ultimate goal for this course is to see it implemented into University of Cincinnati’s curriculum, furthermore include this class as an option to fulfill the requirement for an introduction to proof writing course. My inspiration for wanting to design this course was the lack of the course currently at University of Cincinnati. Throughout my college career, countless professors have been able to site a theorem, the mathematician accredited, and the (rough estimate) year the theorem was introduced. I always found it intriguing that so many mathematicians developed ideas and concepts for many different math disciplines, and I was so curious to know how these mathematicians developed foundation for these concepts. How did the development of agriculture lead to the discovery of the Pythagorean theorem? How did the concept of the Earth being round develop the idea of the derivative? These mathematicians had no resources at their disposal, yet their discoveries still riddle the classroom today. I transferred to University of Cincinnati my sophomore year of college, and when I left my old school, little did I know, I was leaving behind a course I had looked forward to since my math career began. I cannot speak highly enough of the mathematics program at University of Cincinnati, but the one thing I would change is the lack of the history of mathematics course. Thus, I set out to change that.

**Timeline and Product**

The final product, that I will show for this project will be all materials (including lesson plans, syllabi, exams, homework assignments, textbook materials, in class activity plans, and all corresponding grading rubrics) necessary to implement a course of this stature. I am projected to have these materials completed, thoroughly, on (or before) December 1, 2018.