Developing Undergraduate Research Problems in Mathematics

Many of my undergraduate students (even the math majors!) believe that mathematics is a dead subject and that “all one can do with a math degree is teach”. Undergraduate research offers a direct confrontation to this myth, allowing energetic undergraduates to explore open questions and contribute to solutions. In exploring open questions, undergraduates gain an appreciation for mathematics as a vibrant, growing discipline.

In this talk I will discuss the development of good undergraduate math research problems. I will give examples of good problems, beginning with a problem that requires no mathematical training and progressing to problems that require a more rigorous math background. Along the way, I will tell a few stories of my experiences directing undergraduate research and I will attempt to convince the audience that this is an exciting mathematical enterprise!

This talk does not assume any mathematical background. Anyone interested in improving undergraduate education is invited.

For further information, please contact Dr. Emil Schwab, eschwab@utep.edu
Refreshments will be served in front of the colloquium room, 15 minutes before the start of the colloquium.