

UNDERGRADUATE MATH SEMINAR

The next math seminar on the term will be

DATE: THURSDAY, April 14

Time & 12:30 – Refreshments in **Bailey 204**

Location: 12:55 – 1:45 Seminar in **Bailey 207**



Professor Roger Hoerl

In this seminar, **Professor Roger Hoerl** from the Union College Department of Mathematics will deliver the following talk:

Title: Understanding and Addressing Complexity in Problem-Solving

Abstract: Problem-solving is commonly applied in virtually all disciplines. The Hungarian mathematician George Polya wrote a classic text on problem-solving in 1945 that has sold over one million copies. One might argue that statistics as a discipline developed because of unsolved problems in other disciplines, such as conducting the US Census, public health, and agriculture. Unfortunately, much of the literature on problem solving focuses narrowly on technical complexity and ignores other critical aspects of complexity that must be considered in real problems, such as organizational or political complexity.

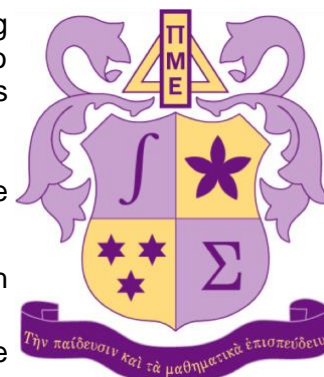
In this talk, we will briefly discuss the development of the theory of problem-solving, beginning with Polya. We will then discuss broader aspects of problem-solving complexity that need to be considered for success, noting the critical but often overlooked impact of complexity in properly defining the problem. We will apply these principles to a couple of major problems facing our society today and offer some thoughts on how to approach complex problems in general.

Pi Mu Epsilon – Math Honors Society Accepting Applications

Pi Mu Epsilon (PME) is a national undergraduate math honors society. In Spring 2013, a chapter of PME was established at Union College. Now we are looking to induct new members who have demonstrated an ability and interest in mathematics consistent with PME's purpose and goals.

To be considered for membership into Union's chapter of PME, a student must have

- taken at least two math courses at the 200-level or above;
- a minimum campus-wide GPA of 3.0 and a minimum GPA of 3.0 in all math courses that can be used to fulfill a math major;
- a demonstrated engagement and involvement, while at Union College, in the promotion of mathematics at Union College and/or broader community, (examples include, but are not limited to, active involvement in the Union College Math Club, in the Association of Women in Mathematics, in the Hudson River Undergraduate Mathematics Conference, in the Calculus Help Center, in math tutoring through the Kenney Center; regular attendance at the Union College Math Department Seminar);
- an interest in joining PME, demonstrated by writing a few paragraphs/mini-essay in an email to **Professor Paul Friedman** (friedmap@union.edu) explaining your interest, your qualifications, and how you have supported and will continue to support the purpose and goals of PME. This email must be received by **noon on Friday, April 22nd**.



The national initiation fee for PME is \$30. This covers the cost of membership and also a one-year (two issue) subscription to the MPE Journal. Members of MPE can also purchase other PME items such as tassels for graduation, t-shirts, etc. For more information, go to the website pme-math.org.

Calculus Help Center: Su, Tu, Th, 7:30-10:00pm, Sorum House Seminar Room