

# Diversity?...

is all around us...right?

# ..In Southern Oregon?...

# Seriously?...

yes...but not in the way you might think!

The most beneficial part of being an ISEE scholar is realizing that, just as there may be no one right answer for engineering problems, there is no single way to conduct engineering education research or to make a poster for that matter

$w = \frac{d^2M}{dx^2}$      $\frac{M}{EI} = \frac{d^2\Delta}{dx^2}$   
 Using the expressions above, explain the underlying rationale for the conjugate beam method.

## Oregon Tech Students Are:

- Primarily Underprivileged (85% on financial aid)
- Primarily Male (85% in School of ETM)
- Primarily Local (82% Oregonians)
- Primarily White (87%)

What makes OIT students cool yes...cool is not their INTERNAL diversity it is their EXTERNAL diversity.

What sets them apart from other college students is that...

**56% are First Generation Students**

First Generation Students enter college with specific challenges

- very little support from families
- lack of preparation
- incorrect assumptions or perceptions

These issues tend to cause serious problems while in college

- poor study skills
- poor time management
- poor critical thinking skills

Which can lead to

- lack of understanding of fundamental principles
- too much emphasis on "getting the right answer"

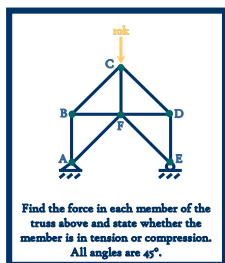
The big question, then, is: **What can we do in the standard "number-crunching" engineering curriculum to help these students?**

As a participant in the Institute for Scholarship in Engineering Education, I was able to:

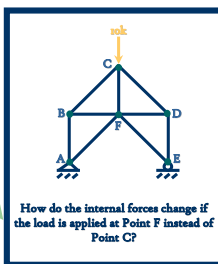
- Define a suitable scope for the study
- Develop an appropriate research question
- Refine methodology into a workable strategy
- Work with other engineering education scholars

This was not the first or second or third version of my research question

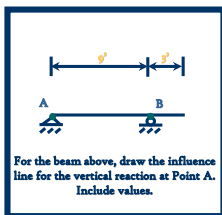
**Does asking open-ended questions help students gain a better understanding of engineering principles?**



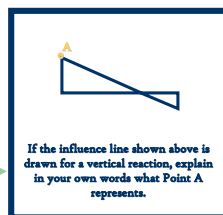
Requires A Calculator



Requires Evaluation Skills



Requires Numbers

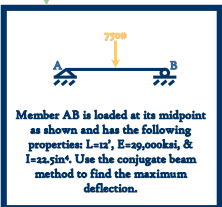


Requires Words

Which leads to my research question

Perhaps the answer is to step outside the typical curriculum and start asking new questions.

Requires Complete Sentences



Requires Equations