

Modeling in an Integrated Mathematics and Physics course

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Department of Mathematics
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Joint Math Meetings
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- Catholic, Jesuit school located in Omaha, Nebraska.

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- 10 – 15 math majors per year.

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- Physics taught from a more conceptual standpoint with an emphasis on vector calculus.
- Course designed around group-based modeling projects.

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 - One part project oriented.
 - One part similar to standard Calc II and General Physics finals.

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- Students use Overleaf to Latex the projects and use CATME to rate their group members.

What We've Learned

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- Projects are scalable.
- Finding the right students can be a challenge.

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- Spend first Thursday/Tuesday working on projects during class time.

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- Students build a peer group.
- Improves student independence.
- Students learn to ask for help.
- Prepares students for undergraduate research projects.

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- Finding ideal class size.
- Managing student stress.
- Team teaching can be awkward.
- Students don't have a uniform skill set.