Writing in Undergraduate Mathematics: From a Special Topics Course to an Integrated Approach

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Electronic Copy of Talk

This talk can be obtained from my web-site

`http://frodo.elon.edu`

under the link Presentations.

Introduction

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- At Elon we long ago set a goal for using writing throughout our major. We now have articulated specific writing goals for the courses in our sequence, from short projects in our calculus classes through proofs of moderate length in our mid-level classes to longer papers in our research seminar; this talk will review the steps that we took in doing so.

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  - Graduating seniors should be able to present on mathematics.

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- Way of encouraging students to investigate topics independently.

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- Revised Discrete Mathematics class to be a course on Mathematical Reasoning.
- Class focused primarily on writing and presentation skills.

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- Intensive course on LaTeX.
- Different kinds of writing assignments.
- Students wrote handbook for other students.

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- Classes developed writing goals.

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- Currently using MiKTeX and TeXnicCenter.

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- Students in proof technique classes should be able to develop proofs over several paragraphs.
- Students in upper-level applied classes should be able to turn in lab reports.
- Students in upper-level theoretical and research classes should be able to turn in term papers long enough to involve sectioning, cross-referencing, and developing ideas.

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- Programs that want to use writing throughout their curriculum should target where the needs are greatest.
- Once writing is working in a given part of the curriculum, there are natural ways to lead to it in earlier classes and build upon it in later classes.
- The most important thing is to motivate the students and the faculty.