



The University of
Montana



**DOCTORAL DISSERTATION RESEARCH PROPOSAL
& ORAL COMPREHENSIVE EXAMINATION**

***Investigating undergraduate Students development of Proof: A
Longitudinal Study***

by

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This presentation outlines the proposed dissertation research. A universal goal of undergraduate mathematics education is to develop and further student's proficiency at proof. The goal of this proposed research is to gain a better understanding of the processes/transitions and obstacles that students go through while learning proof methods and concepts. In contrast to extant research on proof that tends to be interventionist and provides static views of students abilities at proof at specific points in time, my proposed research will be longitudinal in approach and attempt to construct a time series (of sorts) of how proof writing ability develops as post-Math 305 students transition into other upper-level mathematics courses. Over the course of an academic year, different qualitative methods will be used in order to observe, document and study the changes in the students' approaches/abilities to proof.

Committee: Bharath Sriraman (chair), Jim Hirstein, Thomas Tonev, David Erickson (School of Education), Libby Knott (Washington State University)

**Monday May 11th, 2009 1.00-2.00 pm in Math 103 [Open to everyone]
2.10-3.00 [Oral part of Comprehensive Examination]**