

# Introduction to Real Analysis

Dana C. Ernst < Karl-Dieter Crisman < W. Ted Mahavier < W. S. Mahavier

Northern Arizona University  
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This book is intended to be a problem sequence for a one-semester undergraduate real analysis course that utilizes an inquiry-based learning (IBL) approach. There is always a debt to be paid in creating a text, and this one is no different. The primary source for these notes is Karl-Dieter Crisman's *One-Semester Real Analysis* notes<sup>1</sup>, which were based on W. Ted Mahavier's *Analysis* notes<sup>2</sup>, which in turn were based on notes his father (W. S. Mahavier) created.

Below is a partial list of people (alphabetical by last name) that I need to thank for supplying additional content, advice, and feedback.

- [Joshua Bowman](#) (Pepperdine University). The Preface is a modified version of Joshua's *An IBL preface*.
- [Anders Hendrickson](#) (St. Norbert College). Anders is the original author of the content in Appendix A: Elements of Style for Proofs. The current version in Appendix A is a result of modifications made by myself with some suggestions from Dave Richeson.
- [Dave Richeson](#) (Dickinson College). Dave is responsible for much of the content in Appendix B: Fancy Mathematical Terms and Appendix C: Definitions in Mathematics.

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<sup>1</sup>Journal of Inquiry-Based Learning in Mathematics, No. 46 (2013)

<sup>2</sup>Journal of Inquiry-Based Learning in Mathematics, No. 12 (2009)