

Fall 2012 PD

Mathematical Ethics: A Problem Based Approach, Douglas Henrich, October 12, 2012

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Ethics is an important aspect of all students' lives. It is difficult to present ethics to students in a manner that both engages them and provides practical strategies that they can apply both inside and outside the classroom. This is especially difficult when they may not even know what ethics is or confuse ethics with morality. This discussion will outline an approach that has proven successful for high school Computer Engineering students in grades 10, 11 and 12 and Grade 12 Advanced Functions students. **Douglas Henrich's** presentation will examine the dual concepts of mathematical ethics and ethical mathematics. An understanding of mathematical ethics will be examined through the necessity of social responsibility and student engagement as mathematics learners. Using a problem-based model the somewhat controversial conclusion is reached that the only inherent ethics within mathematics is the requirement of consistency. The complete paper and additional support material can be found on his [course website](#) in the Mathematical Ethics folder under the Ethics tab. Computer Engineering material can be found in the Philosophical Ethics folder.



Presenter Profile

Douglas Henrich has been a Mathematics, Computer Engineering and Computer Science teacher at Iroquois Ridge High School, Oakville, Ontario for the past nine years. He lives in Burlington with his wife Marianne, who is a vision itinerant teacher working with blind and low-vision students, and their cat, Archie. Prior to becoming a teacher, Doug spent over twenty-five years working within the police and private security sector and is a former Peel Regional Police Officer. Doug is trained as a CPTED Level I Practitioner (Crime Prevention Through Environmental Design), Use of Force Theory Instructor and has worked as a Security Analyst/Security Consultant where he conducted both CPTED Reviews and facilitated Focus Groups for a wide variety of clients. Doug has worked as a Law and Security instructor at Conestoga College, Kitchener and has served as the Vice-Chair on their Law & Security/Police Foundations Advisory Panel. Doug is also a past sessional instructor at Sheridan College, Oakville teaching Information Ethics to 4th year students in the Bachelor of Applied Information Science program. As well, Doug is the author of *Patrol Procedures for Private Security Professionals* (Pearson, 2001) and is currently working on his second book: *Practical Ethics: Developing a Social Conscience*. Doug has presented on ethics topics at the Board level as well as for the Grand Valley Mathematics Association (November, 2011), the Ontario Association of Mathematics Educators (OAME – May, 2012) and at the Fields Institute Math Ed Forum (September, 2012).