

1086-K1-2269 **Monica VanDieren*** (vandieren@rmu.edu) and **Heather Pinson** (pinson@rmu.edu), Robert Morris University. *Discovering Connections Between Modern Mathematics, Music and Art.*

This presentation will describe an interdisciplinary honors course created and team-taught by a mathematician and musician at Robert Morris University. The biennial course attracts students with varied experience and interest in mathematics and music.

We organized the course around four themes: symmetry, infinity, searching for truth, and improvisation and incorporated examples from the late nineteenth and early twentieth centuries. Focus was placed on the development of mathematical logic and the transition in music from the Romantic period to avant-garde. Art was used as a bridge to visualize and conceptualize the more abstract mathematical and music theoretic content.

A main course objective was to examine major developments in mathematical and musical history that utilize the creative process as a way to incite new ideas. Then, we assessed the students' understanding of the creative process in two final projects: 1. students examined what the creative process means in their own majors, and 2. students found other evidence of the creative process used in disciplines outside of their academic training such as poetry, photography, pop music, clay models, musical performance, java applets and animations. (Received September 25, 2012)