

Journey Through Genius

UHON 222-011 | T R | 11:00-12:15 | SHC 12 | 25074

Dr. Chris Holden

We will study examples of the works of genius of about a dozen of the greatest mathematicians of all time ranging from early Greeks through Europeans of the twentieth century. We will look at these ideas systematically using our main text "Journey Through Genius". In so doing, we will try to gain an appreciation of their work as we would try to appreciate Bach or Mozart by listening with great care to some of their works of genius. We will form six groups of students, two to three to a group, and each group will select two of our twelve chapter subjects. The groups will present to the rest of us some of what they have learned in their chapter. We will have extended discussions on these presentations, and the other students will formulate questions to further discussion. In addition to our detailed mathematical work, we will look at the lives and personalities of some fictional but true to life mathematicians as portrayed in three novels and one play. To appreciate mathematics, it will be necessary to delve into proofs and algorithms, for they are the very stuff of mathematics. If you have always thought that mathematics and excruciating boredom were different names for the same thing, this seminar just might change your mind.

Readings

"Journey Through Genius" by William Dunham

Requirements

As you can see from above, each student will be involved in three class presentations - two on chapters from "Journey Through Genius" and one on a fictional work about mathematics. In addition, attendance is an absolute must. This is a seminar, so each of you needs to contribute to each class with active listening and probing questions. We will also have two extended take-home exercises one due at the end of the eighth week and the other due at the end of the fifteenth week to insure that everyone has some acquaintance with the mathematics not in his or her presentations.

About the Instructor

Chris Holden is a mathematician for the people. He received his Ph.D. in number theory from the University of Wisconsin-Madison. Originally from Albuquerque, his current research focuses on place-based mobile game design and implementation. Chris enjoys video games like DDR and Katamari Damacy, and he takes a whole lot of photos.