

Quadrivium I Course Syllabus

“From the time of Plato’s Academy down to the Renaissance, mathematics was considered an essential part of liberal education, and to rescue it from being a mere tool subject for applied science is simply to bring it home.”

The School Examined, Vincent Edward Smith.



Overview

The Quadrivium I course covers the first two of the mathematical liberal arts: Arithmetic and Geometry. It will feature interdisciplinary study where students explore numerical relations, Euclidean reasoning, logical demonstration, and mathematical thinking. Integral to this work is the challenge for students to contemplate order as it unfolds in the integration of mathematics, the natural sciences, philosophy, and the Great Conversation in the history of ideas.

The revival of the Liberal Arts Tradition in Classical Education has focused almost exclusively on the Trivium (the first three of the seven liberal arts that focus on mastery of language and include grammar, logic, and rhetoric). The Quadrivium I and II courses provide an opportunity for students to bring to fulfillment the formation they began with the Trivium. These courses feature an overview of the four mathematical ways of grasping the order that fills our world. The same four ways that were an essential part of the education received by the greatest minds in Western Civilization.

Major Units of Instruction

- Geometric Instruments - Geometric Procedures - Foundations of a Science - Proofs with Triangles - Parallels - The Composition of Quadrilaterals - Ratio - The Golden Ratio - || - Counting - Numbers in Themselves - Demonstration with Natural Numbers - Primes and Relative Primality - Linear Diophantine Equations - Relations between Numbers -

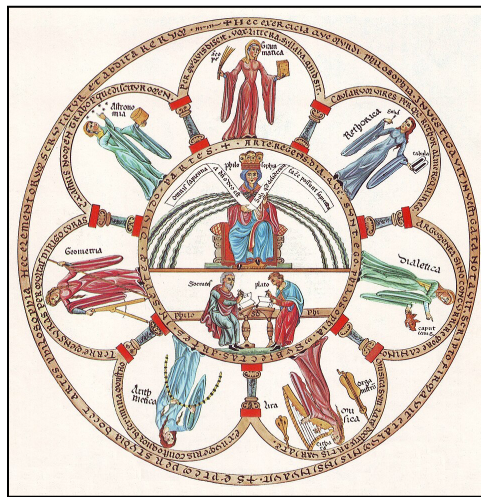
Textbook: A Brief Quadrivium (Peter Ulrickson)

Assessment Assessment is the essential way we communicate as teacher and pupil: how you show me what you have learned and how I show you the quality of your learning. It is my sacred duty to provide you opportunities to demonstrate mastery and to exercise truth and justice in my feedback about your demonstrations. Assessment should not be a punishment, it should be a blessing. You bless me by your virtuous work as a student. I bless you by striving to provide meaningful feedback on your path to cultivating wisdom and virtue.

Student Expectations

Students are expected to follow the *Rules of a Virtuous Classroom* and to provide the following materials each week:

1. Pencil
2. Compass
3. Straight edge
4. Journal
5. Scratch paper



“In mathematics, as in many endeavors, discipline and regularity contribute greatly to success. You and your students can succeed in the study of the quadrivium. Follow the plan here, and enjoy the way.”

Teaching the Quadrivium, Dr. Peter Ulrickson (author of A Brief Quadrivium).