How to Teach Your Own Liberal Arts Mathematics Course

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Abstract / Synopsis
The article encourages Mathematics faculty members to design their own Liberal Arts Mathematics courses by using their own interests and expertise to link mathematics to the world of their students. The author argues that any such course should be guided by these five principles: Draw on the interests of each individual student; teach important mathematics; go slowly enough so students have a sense of mastery; encourage the students to use the mathematics they already know; and let students create projects on topics they choose and then share their projects with the class. The author describes how she implements these principles in two of her own Liberal Arts courses, “Mathematics, Philosophy, and the ‘Real World” and “Mathematics in Many Cultures.” The article includes examples of the materials used in these courses, and provides an extensive bibliography. It also lists a set of actual student projects from each course. It concludes that courses designed according to its principles result in students being able and willing to do mathematics, and knowledgeable and enthusiastic about the role mathematics plays in the wider world.

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Students See How Far a Little Math Can Take Them in Their Daily Lives Mathematics for the Liberal Arts teaches everyday mathematics topics to non-math majors. Through numerous examples and more than 600 exercises, students learn how to use math seamlessly in a variety of practical areas, from conversion factors, statistics, visualization, money, and risk to games, art, music, and humor. The text develops a logical, real-world approach to data and reasoning, showing students how to: Think both analytically and visually about data. Use graphics to make a point. Make sound monetary and nonmonetary decisions. Evaluate risk taking. Strategize to win at games. Appreciate more fully art, music, and humor. Liberal arts students are often required to take one math course. Often that course consists of a bunch of useless clerical skills. How to do partial fractions decompositions and the like is what students are told “mathematical thinking” is about. In some cases professors feel the one math course that the philosophy major takes is not worth attention because students who didn’t learn that material in high school the way they were supposed to aren’t any good. When a university has a course intended to acquaint those who take only one math course with the fact that mathematic... Although modern liberal arts curriculums have an updated choice of a larger range of subjects, it still retains the core aims of the liberal arts curricula maintained by the medieval universities: to develop well-rounded individuals with general knowledge of a wide range of subjects and with mastery of a range of transferable skills. Formal sciences – includes mathematics, logic, statistics, etc. The term ‘liberal arts education’ can also be applied to the dedicated study of just one of the above subjects (for example, a student studying a BA in Philosophy could be said to be undertaking a liberal arts education). Liberal arts colleges typically rely heavily on student participation and encourage a high level of student-teacher interaction, mentorship, and collaboration.