Senior Seminar Proposal

Name: Bernhard Riemann

Major Plus Two: Mathematics Major, German Minor, Latin GEC.

Seminar Choice: MATH 495X: Advanced Topics in Number Theory

Have you taken Math 309 or do you plan to take it concurrently with seminar?
I have already taken Math 309.

Proposal

Why is this seminar your first choice? Please discuss your mathematics interests, the course specifics, scheduling needs, and other reasons for your choice.

The Advanced Topics in Number Theory course seems like the perfect capstone experience for me. I took the Number Theory course in the fall of my junior year and I am eager to learn more about topics like algebraic number theory, p-adic analysis, Diophantine equations, factoring algorithms, Fermat’s Last Theorem and gaps between primes. These topics are related to . . .

Some of these topics were explored in the number theory course; however, I can see how abstract algebra, s21, and even analysis are related to the topics in the seminar. This course will complement the mathematics that I have seen before and let me use my skills from these courses to understand and work on advanced number theory topics. I am particularly interested in the complex analysis applications to the distribution of primes . . . .

Also, I travel for the skiing team every Friday, so it is not possible for me to take Professor Weber’s course on Advances in Electromagnetism which meets on Mondays and Fridays.