# 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 l 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 . . .

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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 . . . .

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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.