Math Minor

Swayam Chube

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Logistics

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- There are 5 courses offered by the department, each is worth 8 credits, whence you need only take 4 courses in order to complete the minor.

Courses Offered

Odd Semester

- MA403: Real Analysis
- MA419: Basic Algebra

Even Semester

- MA5106: Fourier Analysis and Applications. Prereq. MA403
- MA412: Complex Analysis (Even Years)
- MA406: General Topology (Odd Years) Prereq. MA403

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Since Real Analysis is a prerequisite for two of the five courses, it is recommended to take it first.

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- Recommended Reference: Principles of Mathematical Analysis by Walter Rudin.

MA419: Basic Algebra

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- Recommended Reference: Abstract Algebra by Dummit and Foote.

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- Recommended Reference: Topology by James Munkres.

Complex And Fourier Analysis

I have not taken these courses yet, so take what's written here with a grain of salt.

- As opposed to Real Analysis, Complex Analysis is quite fun.
- Mainly an extension of ideas seen in Real Analysis to functions of **one** complex variable.
- There are some beautiful results in this area, for example the Riemann Mapping Theorem, which states that any proper *simply connected* region can be mapped in a *nice* way to the unit disk in $\mathbb{C}$.
- Recommended Reference: Complex Analysis by Stein and Shakarchi or Functions of One Complex Variable by John B Conway.

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- I don't know much about Fourier Analysis but a recommended reference is: Fourier Analysis by Stein and Shakarchi. This book should be accessible after taking MA403 since it only uses the Riemann Integral throughout.