

## Learning Outcomes for MATH 4210, Analysis II

- The students will be able to rigorously prove basic facts from metric-space topology, Fourier analysis, polynomial approximation theory, and multivariable calculus.
- The students will demonstrate their ability to write coherent mathematical proofs.
- The students will be able to demonstrate their understanding of how the results in calculus and advanced calculus follow from the principles of mathematical analysis.
- The students will demonstrate their ability to use tools from mathematical analysis in providing rigorous solutions for problems from calculus and its applications.
- The students will be able to choose the appropriate techniques from mathematical analysis to generate mathematical proofs.