

**Tennessee Technological University
Mathematics Department**

**MATH 4110-4120/5110-5120
Advanced Calculus I-II**

I. COURSE DESCRIPTION FROM CATALOG:

Rigorous treatment of functions of one and several variables, improper integrals, sequences, infinite series, uniform convergence and applications. Students are expected to improve their ability to work in an abstract setting using precise definitions and formal proofs and to present

4120/5120:

1. Functions in Metric Spaces
2. Limits and continuity for functions of several variable and vector-valued functions
3. Differentiation for functions of several variables and vector-valued functions.
4. Lebesgue Measure
5. Lebesgue Integral
6. Fourier Series

VI. ADDITIONAL INFORMATION

Graduate credit is earned on the basis of $\Gamma m0t 0/F3 ro53T/F2 15 Tm0 g0 G(o)JTEQ0.0000m992 0 610 0 1$