Math-205 Differential and Integral Calculus

1. Sequences, infinite series: **3 lectures(1 week)**
2. Convergence tests: Comparison, limit comparison, ratio, root, alternating series tests: **9 lectures(3 weeks)**
3. Power series (radius and interval of convergence), Taylor and Maclaurin series, power series representation of functions, Binomial series: **9 lectures(3 weeks)**
4. Vectors, vector algebra, dot and cross products, lines, planes, surfaces, vector functions and applications, functions of several variables, partial derivatives and Chain Rule: **9 lectures(3 weeks)**
5. Gradients, local extrema of functions of two variables, Lagrange multipliers: **6 lectures(2 weeks)**
6. Double integrals and applications (area and volume), double integrals in polar coordinates: **9 lectures(3 weeks)**