**MATH 201** : **Differential and Integral Calculus** 4 (3+1+0) credit hours

Cartesian, cylindrical and spherical coordinate systems, Functions of two and three variables, limits and continuity, partial derivatives, the chain rule, extrema of functions of two variables, Lagrange multipliers, Double integrals, moments and center of mass, double integrals in polar coordinates, triple integrals, application of triple integrals, triple integrals in cylindrical and spherical coordinates, surface area, Sequences, infinite series, convergence tests, representation of functions by power series, Taylor and Maclaurin series, the binomial series.  
Prerequisite : MATH 111

**Required Text Book**:  
Calculus.By Earl W. Swokowski, Michael Olinick, Dennis Pence, and Jeffery**A. Cole.** Publisher: PWS Pub. Co.; 6th edition (January 1994).

**Other References**:حساب التفاضل والتكامل للدوال في عدة متغيرات، تأليف: تحسين غزال- مصطفى دملخي - سعدون البراهيم. الناشر دار الخريجي للنشر والتوزيع