

MATH 2100	Calculus II	3 Credit Hours
Prerequisites:	MATH 1200	
Goal	To provide the students with further calculus to extend the applications	
Objectives		Outcomes
<p>The course should enable the student to:</p> <ol style="list-style-type: none"> 1. Grasp the various techniques of integration 2. Perceive the partial derivatives in dealing with functions of two and three variables 3. Conceive multiple integration 4. Realize the mathematical model to formulate the governing differential equation of a problem and predict the solution under different sets of conditions 		<p>The students should be able to:</p> <ol style="list-style-type: none"> 1. Apply various techniques of integration 2. Employ definite integrals to find area between two curves, volume, arc length, work, power and energy 3. Deal with indeterminate forms and improper integrals 4. Recognize integrals with infinite limits of integration 5. Carry out partial derivatives 6. Find total differential and approximations 7. Treat integration by partial fractions 8. Deal with functions of several variables and carry out multiple integrals 9. Deal with infinite series and test for convergence and divergence 10. Operate with conic sections and polar coordinate system with applications 11. Differentiate and integrate power series 12. Be familiar with numerical approximations of integrals 13. Formulate the differential equation by using mathematical model approach to represent a realistic situation and find the solutions which predict the behavior under various boundary conditions