

QSCI 292

SUMMARY OF TOPICS

- Area under curves
- Concept of a DEFINITE INTEGRAL developed
- The "amazing" FUNDAMENTAL THEOREM of CALCULUS
- The INDEFINITE INTEGRAL: an ANTIDERIVATIVE
- Integration Techniques
 - * integration rules
 - * integration by parts
 - * partial fractions
 - * change of variables
 - * tables of integrals
- Applications
 - * areas, surfaces, volumes
 - * multiple integrals
 - * integrals involving polar coordinates
 - * differential equations
 - * probability
 - * Fourier series
 - * orthogonal polynomials