



MATHEMATICS 017 "TOPICS FROM APPLIED MATHEMATICS 217"

Calendar Description: E(8 hours)

Inverse functions and inverse trigonometric functions. Hyperbolic and inverse hyperbolic functions. Indeterminate forms. Applications of integration.

Prerequisite: Consent of the Department.

Syllabus

<u>Topics</u>	<u>Number of Hours</u>
Inverse functions: Definitions, properties, Derivatives of inverse functions.	1
Inverse Trigonometric functions: Definitions and properties, Derivatives and Integrals involving inverse trigonometric functions.	2
Hyperbolic and Inverse Hyperbolic functions: Definitions and properties, Identities, Derivatives and integrals involving Hyperbolic or inverse Hyperbolic functions.	1
Other Indeterminate Forms: The indeterminate forms $\frac{0}{0}$, $\frac{\infty}{\infty}$, L'Hopital rule, other forms: 0 , ∞ , 0^0 , 1^∞ , or ∞^0 .	2
Applications of Integrations: Volumes of solid of revolution, Arc length of a plane curve, areas of surfaces of revolution.	2
	8

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