Mathematics 253   Calculus II

Inverses of trigonometric functions. Methods of integration, improper integrals. Separable differential equations, first and second order linear differential equations, applications.
Course Hours: H(3-1T-1)
Prerequisite(s): Mathematics 249 or 251 or 281 or Applied Mathematics 217.
Antirequisite(s): Credit for more than one of Mathematics 253, 263, 283, or Applied Mathematics 219 will not be allowed.
Notes: Mathematics 253 or 283 is a prerequisite for many 300-level courses in Pure Mathematics, Applied Mathematics, Statistics and Actuarial Science. Students in programs offered by the Department of Mathematics and Statistics are strongly recommended to take Mathematics 283.

Syllabus

Topics	Number of Hours
Inverse functions, inverse trigonometric functions	5
Techniques of integration, numerical integration, improper integrals	9
Applications of integrals (area, volumes)	5
Taylor polynomials	5
Differential equations: separable, linear first and second order, constant coefficients, undetermined coefficients, variation of parameters	12
TOTAL HOURS	**36**

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