

COURSE ID SHEET



Course No.	5268	NTUA							
Semester:	1	Core	X	Elective		Specialization			
Title:	MATHEMATICS I (Calculus of functions of one real variable)								
Aim:	Understanding the concepts of convergence of sequences and series of real numbers. Learning of power-series expansions and basic integration techniques. Applications to calculating areas, volumes, arc-lengths.								
Content:	- Sequences and series of real numbers. - Limits and continuity. - Trigonometric and hyperbolic functions and their inverses. - Differential calculus (Taylor's theorem). - Power-series expansions. - Integral calculus (integration techniques). - Applications of the definite integral. Improper integration. - Differential equations of order at most two with constant coefficients.								
Hours per semester:	LECTURES	52	EXERCISES	-	LABORATORY	-	HOME-WORK	98	TOTAL HOURS: 150
Student performance/evaluation:	Comprehensive final exam.								