Course Title: Mathematical Methods for Engineering	**Number of Units:** 1
SSD: MAT/05	**CFU:** 6
Course aims: Familiarise the student with the fundamental ideas and the main solving techniques for problems involving Fourier and Laplace transforms.	
Course Description: Complex number system. Functions of complex variable: holomorphic functions and conformal mappings; Cauchy-Riemann conditions and harmonic functions. Uniform convergence of sequences and series of functions, power series. Taylor series expansions. Laurent series expansions. Introduction to measure theory; Lebesgue measure and integral, main properties. Fourier transform and inversion formula; properties of the transform, convolution. Fourier series, convergence theorems. Laplace transform and inversion formula; properties of the transform, applications to differential models.	
Assumed Background: Mathematical Analysis II - Algebra and Geometry	
Assessment methods: Written and oral examination	