

**Benha University**  
**Faculty of Engineering-Shoubra**  
**Contents of Courses of Mathematics**

**First Year- Electrical Engineering (Power)**

Mathematics 2 (B): Code No. RFA 173, 4 + 2 Hours, 50 + 100 = 150, (2<sup>nd</sup> Term)

- (i) Laplace transformations and inverse Laplace of functions, Laplace transformations of derivatives and integrals, solution of differential equations
- (ii) Special functions: gamma function, beta function, delta function, Legendre's polynomials, Bessel's functions
- (iii) Series solution of ordinary differential equations
- (iv) Partial differential equations: one dimensional wave equation, separation of variables method, D'Alembert method, one dimensional heat equation