



Technical college\Mosul	30 Weeks	No. of week hours		
Department: Medical Instrumentation Engineering		Th.	App.	Unit
		3	-	6
Second Year	Subject: Mathematics(II)			

أهداف المادة :

مساعدة الطالب على تفهم القوانين والمسائل الرياضية اللازمة لغرض حل الدوائر الكهربائية البسيطة والمعقدة .

Week	Syllabus
1 st , 2 nd	Vector analysis and vector fields. Linear algebra , vector calculus, scalars and vectors – unit , orthogonal vector.
3 rd	Dot product , cross product.
4 th , 5 th	Theory for vector fields vector variable function.
6 th , 7 th	Polar and spherical coordinate– gradient in polar coordinates.
8 th , 9 th	Complex number, polar form of Complex number, linear .
10 th , 11 th	Algebra for Complex number in polar and spherical coordinates.
12 th , 13 th	Infinite series, power series, Fourier series.
14 th , 15 th	Convergence and divergence series.
16 th	Number and complex functions.
17 th 18 th	Complex variable, Cauchy– Riemann equations complex series, Taylor series .
19 th , 20 th	Differential equations.
21 st , 22 nd	Differential equation of the first order and of n order.
23 rd , 24 th	Applications.
25 th , 26 th	Multiple integration.
27 th , 28 th	Surface area.
29 th	Greens theorem, stokes theorem.
30 th	Lap lace transformation.