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النقاط الرئيسية في كل محاضرة

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	Lecture(1): General
✓	Course Syllabus
✓	Course Grading
✓	The meaning of differentiation
✓	Types of differential equations (partial, ordinary, delay and integral)
✓	Type of system of ordinary differential equation (initial value problem IVP, Boundary Value problem BVP)
✓	Interaction terms in a differential equations
✓	Linear and nonlinear differential equation
	Preparation for next lecture: How to solve an ordinary differential equation analytically
	Lecture(2): reference(1) Chapter 1
✓	Linear system of ODEs
✓	Transfering an higher order of DEs to a linear system of ODEs
✓	Coupled and uncoupled Linear systems
✓	Example: $x'_1 = -x_1 \ and \ x'_2 = 2x_2$ uncouple linear system and solutions
✓	Phase portrait: solutions' curves in the (x_1,x_2)-plane
✓	Vector field:mapping of f(x)=Ax
✓	$x'_1 = x_1, x'_2 = x_2 \ and \ x'_3 = -x_3$
✓	Stable and unstable subspace
	HW(1): Page (5) (1c, 3) on Sunday 16th Sept 2012

References:
1-"Differential Equations and Dynamical Systems", Lawrence Perko, Springer-Verlag.
2-"Ordinary Differential Equation", Richard Miller and Anthony Michel, Academic Press.