## (KEY CONCEPT) [A-5-3] $\int_{\infty} V_{\infty}$ Aircraft wing ("lift" producing device): Area S = projected wing "planform" area Length l = c = wing "chord length" Area S **Circular cylinder** ("drag" producing device): Area S = projected cylinder "frontal" area Length l = d = cylinder "diameter" (a) L (per unit span) Airfoil is a "unit span" $V_{\infty}$ cross-sectional property (quasi 2-D concept) of an aircraft wing (b) Wing and airfoil geometry sketch (source: J.D. Anderson "Fundamentals of Aerodynamics" 2016)

