## EECS 1668/2068 02/02/2023. Lecture 6 MULTI INPUT MULTI OUTPUT (MIMS) SYSTEMS TWO INPUT TWO OUTPUT SYSTEMS $X = \{(x) + \mathcal{J}_1(x)u_1 + \mathcal{J}_2(x)u_2$ $X = \{(x) + \mathcal{J}_1(x)u_1 + \mathcal{J}_2(x)u_2\}$ $X = \{(x) + \mathcal{J}_1(x)u_2 + \mathcal{J}_2(x)u_2\}$

# of entities that can be Controlled = # of inforts

.. (x)

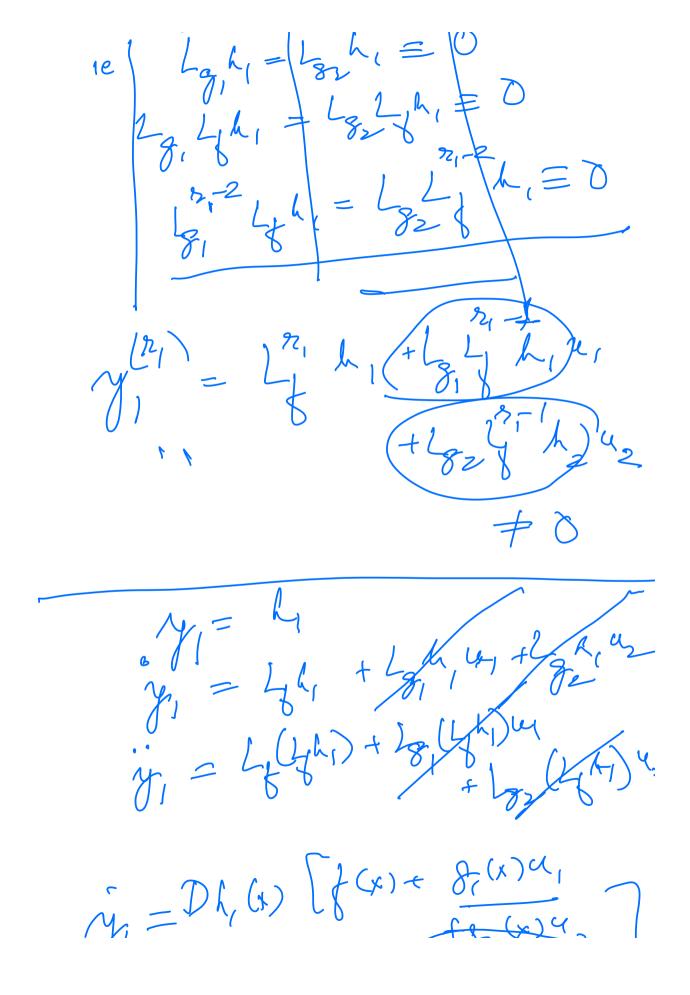
40= h2 (x) Lireanizahn &  $= \frac{d}{dt} L_{1}(x) = \mathbb{D}h_{1}(x) \stackrel{\circ}{\times}$ = Lah, 60 + Lah, 60 m,  $I_{1} = \frac{1}{82} I_{2} I_{3} I_{3}$ et R, be the Smallest Such that

Such that

(2,-1) do not

Tirify ... I depend in either

U, or 42



01

71 =

I (4) excb (4) ENC. 4 (x) -27/h, [M] TITO is said to have re rel-degre  $(x_1, x_2)$   $\ddagger$   $lgh_1 = lgh_1 = \dots$   $lgh_1 = lgh_1 = \dots$ e he L8, L/1-4, or

lg lghz = -= Lg [3] La 1/2-1/2 on 1/32/2-