

SEOUL NATIONAL UNIVERSITY
SCHOOL OF MECHANICAL AND AEROSPACE ENGINEERING

SYSTEM CONTROL

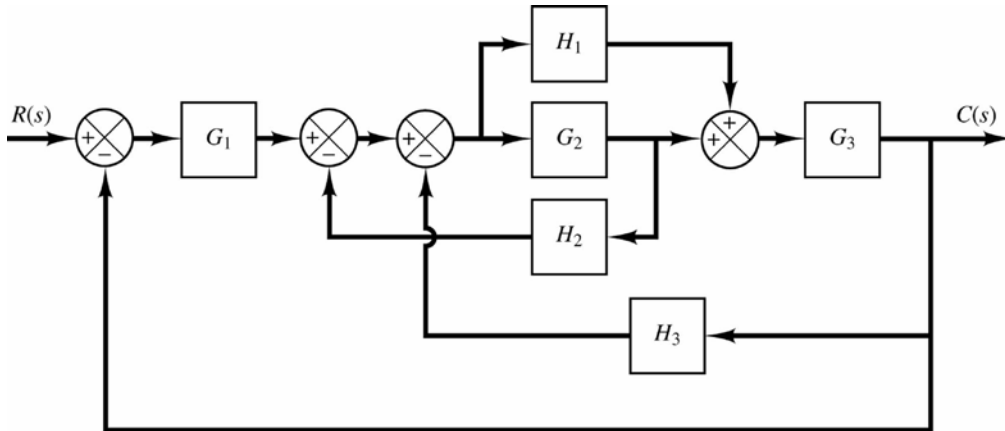
Fall 2014

HW#2 Mathematical modeling of control systems

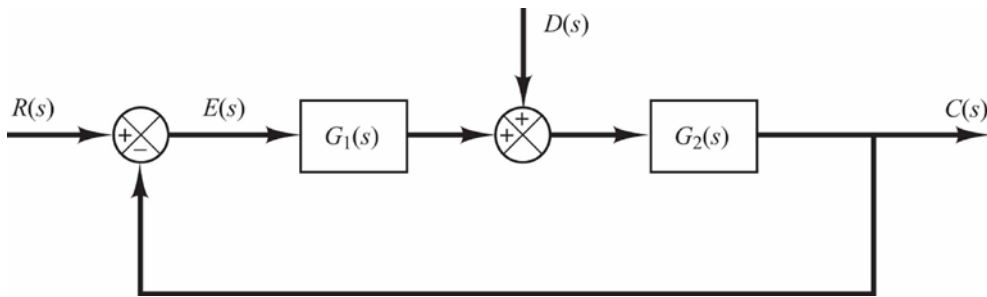
Out: September 18, 2014 (Th)

Due: September 30, 2014 (Tu)

[1] Simplify the block diagram shown in the Figure below and obtain the closed-loop transfer function $C(s)/R(s)$.



[2] Consider a system shown below. Derive the expression for the steady state-error when both the reference input $R(s)$ and disturbance input $D(s)$ are present.



[3] Obtain a state space representation of the system shown below.

