

EEL333

Multivariable Control

09.10.2018

Minor Test 2 Solutions

Homework → MOODLE

Mid-semester feedback (to be discussed)

next set of topics

Design specifications

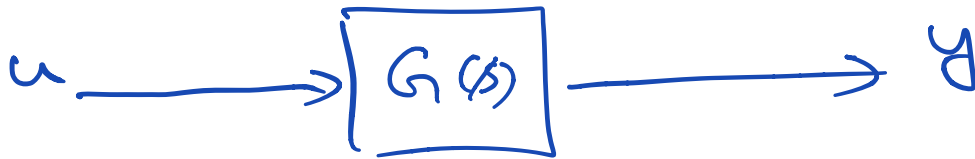
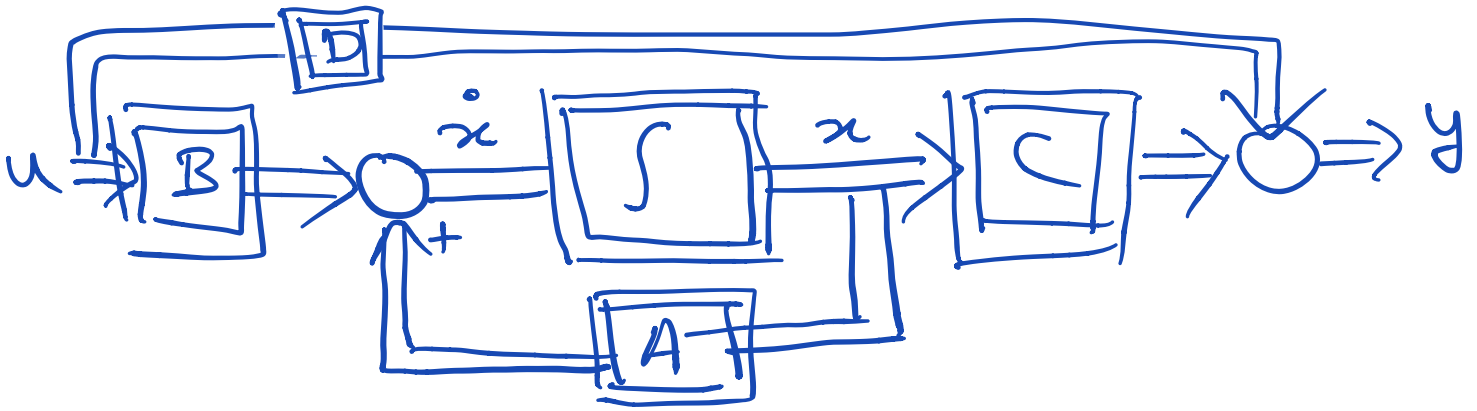
- transient response (overshoot, settling time)
- steady-state response (error)
- robustness (noise, disturbance)
- stability

$$\dot{x} = Ax + Bu$$

$$y = Cx + Du$$

In design, we have to choose 'u' (the input) so that 'y' (output) or 'x' (state) follow desired specifications.

How to choose 'u'?



Feedback from  $y$  to  $u$  (output feedback)  
 from  $x$  to  $u$  (state feedback)

Feed forward from  $u$  to  $y$