

EE/CprE/ComS 571X  
Discrete Event Systems Control

Homework # 7

Due:

**Problem 1** Let  $H = pr(K)\Sigma_u^* \cap L(G)$ , prove the following

1.  $H \supseteq K$ .
2.  $[H = pr(H)] \wedge [pr(H)\Sigma_u \cap L(G) \subseteq pr(H)]$ .
3.  $([H' \supseteq K] \wedge [H' = pr(H')] \wedge [pr(H')\Sigma_u \cap L(G) \subseteq pr(H')]) \Rightarrow H' \supseteq H$ .