

# PENNSSTATE



HW #1 DUE MON

EMERGENCY = CRASH

## IE 419

# Work Design: Productivity and Safety

Dr. Andris Freivalds

Class #5



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**IE 419**  
**Work Design:**  
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# Worker-Machine Relationships

(Ch. 2, pp. 50-55)

- Worker-machine relationships

- Synchronous servicing – regular cycles

$$N \leq \frac{(P + m)}{(P + W)}$$

*Handwritten notes:*  
↖ load/unload (BOTH)  
↖ machine (ONLY)  
↖ worker (ONLY)

- Random (asynchronous) servicing – random

- Combination – real life      SIMULATION IE 453