

PENNSYLVANIA STATE UNIVERSITY

HW #1 => MON



IE 419
Work Design:
Productivity and Safety

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Class #4

Worker-Machine Relationships

PERT/CPM

(Ch. 2, pp. 40-53)

- Multiple activity charts: activities of workers, products, machines recorded on same time scale to show relationships
 - Worker-machine process charts
 - Gang process (multi-man) charts
- Worker-machine relationships *MANUFACTURING*
 - Synchronous servicing – regular cycles *SERVICE*
 - Random (asynchronous) servicing – random
 - Combination – real life *SIMULATION*

Worker-Machine Process Chart

(Find best relationship, min idle time)

MAX UTILIZATION

- Operator on left
- Machines on right
- Common vertical time scale
- Solid = productive time
- White = idle time
- Gray = load/unload (time both are interacting) *CLEAN*
- Summary analysis

