

PENNSSTATE



IE 419

Work Design: Productivity and Safety

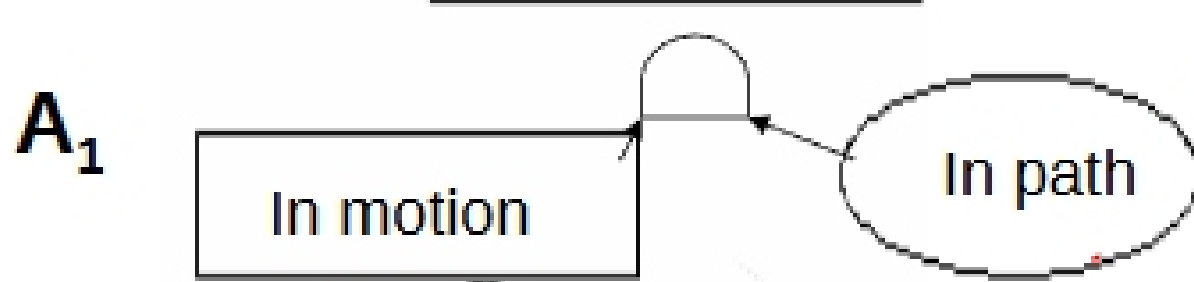
Dr. Andris Freivalds

Class #27

Ex. #8 – FTA for Coffee Mill Injury

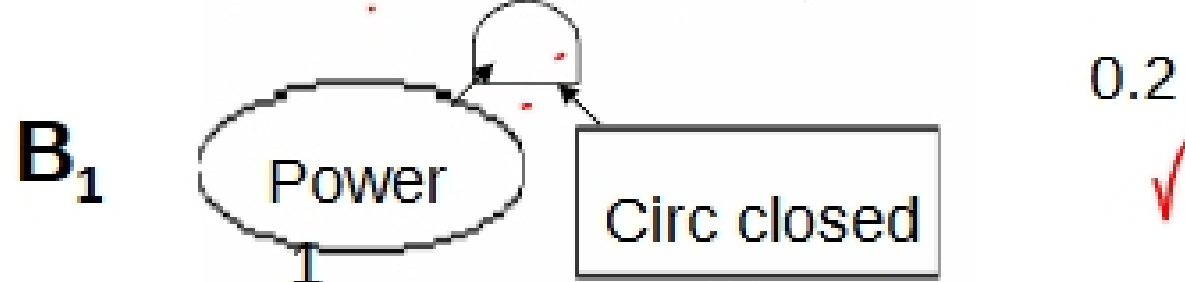
$$P(T) = P(A_1)P(A_2) = .2(.12) = .024$$

Rotor cuts finger

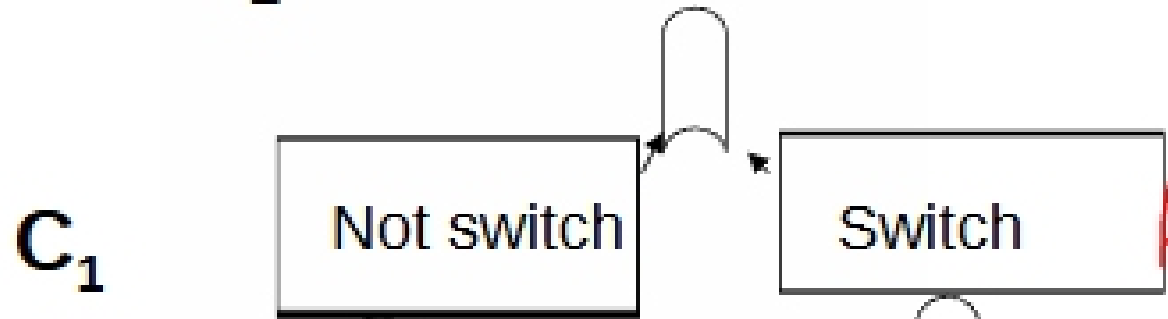


A₂

$$P(A_1) = (.1)(.12) = .12$$



$$P(B_2) = 1 - (1 - .1)(1 - .022) = .12$$



$$P(C_2) = 1 - (1 - .001)^2(1 - .1) = .1$$

$$1 - (1 - .001)^4(1) = .002$$

$$P(C_1) = 1 - (1 - .001)(1 - .1)^2 = .022$$

Ex. #9 - Cost-Benefit for Coffee Mill

$$.024 \times \overset{A}{200} = \overset{A}{4.80}$$

Alternative	Probability	Cost	Criticality	Benefit	<u>Cost</u> <u>Benefit</u>
1) Interlock – switch in cover					
2) Warning label					
3) Better QC					
4)					