STAT 5700 formulas

$(A \cup B)' = A' \cap B'$

$(A \cap B)' = A' \cup B'$

$P(A) = 1 - P(A')$

$P(A \cup B) = P(A) + P(B) - P(A \cap B)$

${}_nP_r = \frac{n!}{(n-r)!}$

${}_nC_r = \frac{{}_nP_r}{r!} = \frac{n!}{(n-r)!r!}$

$P(B|A) = \frac{P(A \cap B)}{P(A)}$

$P(B'|A) = 1 - P(B|A)$

Bayes Rule: $P(A|B) = \frac{P(B|A)P(A)}{P(B)}$