Lecture 9. Converse(逆命题), Contrapositive(逆否命题) and Inverse (否定 命题)

Implication or conditional statement: $p \rightarrow q$ Converse - $q \rightarrow p$ Contrapositive - $\neg q \rightarrow \neg p$ Inverse - $\neg p \rightarrow \neg q$

- Converse (逆命题): 给定一个条件语句, 其逆命题是通过交换条件和结论而得到的命题
- **Contrapositive (逆否命题)** : 给定一个条件语句,其逆否命题是将条件和结论都否定并交换位置得 到的命题
- Inverse (**否定命题**): 与逆命题和逆否命题不同,否定命题是仅仅对原始条件语句中的条件部分进行 否定,而保持结论不变

Facts:

- Implication and contrapositive both are equivalent
- converse and inverse both are equivalent
- Nither converse nor inverse is equivalent to Implication

Example: "If it rains today then, I will stay at home."

Converse - If I will stay at home then it rains today.

Contrapositive - If I will not stay at home, then it does not rain today.

Inverse - If it does not rain today then, I will not stay at home.

TRUTH TABLE 79 ->7p $p \rightarrow q$ $q \rightarrow p$ ٦q 7p ->7q 9 ٦p т т т F Т Т Т Т Т т Т