

## KC32603 Process Simulation and Integration

### In-Class Exercise 3 (CLO4 – PLO5; WP1, WP4; WK3, WK4, WK5 WK6)

#### **Situation 1:**

Feed 1:

Comp: Methane (0.4), Water (0.6)

Temp: 100 °C

Pres: 1 atm

EOS: Peng-Robinson

Flowrate: 100 kmol/h

Top: Methane (vap.)

Bottom: Water (liq.)

Construct a simulation process that taking the above conditions by considering the highest recovery of both products. Justify every single selected process/equipment in your simulation.

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#### **Situation 2:**

Feed 1:

Comp: Methane (0.5), Water (0.5)

Temp: 100 °C

Pres: 1 atm

EOS: Peng-Robinson

Flowrate: 100 kmol/h

Top: Methane (liq.)

Bottom: Water (liq.)

Construct a simulation process that taking the above conditions by considering the highest recovery of both products. Justify every single selected process/equipment in your simulation.