# EE 204: Fundamentals of Electric Circuits

*Instructor: Umar M. Johar*  *Due date: May 29, 2007*

## Design Project (062)

Knowing that a device operates with **208$\underline{0°}$ V (rms)** at 60 Hz and that it absorbs **8kW** of power at **0.7 lagging** power factor, **find:**

1. the **capacitor** that must be connected in parallel with the device in order to make the power factor of the source equal to **0.95 lagging**.
2. the **impedance** of the device.
3. the **complex power** of the source.
4. the **apparent power** of the source.
5. the **real power** of the source.
6. the **reactive power** of the source.