

Familiarization and Safety: *Results*

Lab 1: ECE330 – Introduction to Power Engineering

Name	Student ID	CCID	Lab Section

The Pre-lab will be collected at the beginning of the class period so please make sure that you have it completed before your scheduled lab section.

Lab reports are due approximately 1 week after you attend your lab section, check eClass for the exact time. All reports need to be submitted to the appropriate link as a single pdf on eClass. You only have to hand-in one copy per group. Please have your pages in a single pdf file in the following order:

- Use a scanned/picture copy of this page as your cover sheet. Make sure your names, student ID's, CCID's and lab section are visible in the table above. You also need to obtain a signature in class below at the completion of your laboratory.
- A scanned/picture copy of the remaining completed Results sheet. Make sure you have the required 4 signatures.
- The answers to the post-lab questions.

It is recommended that you scan these sheets for best clarity, but you may also take photos of them as long as they are legible. The files and photos then need to be converted to pdf and combined into a single pdf file for submission.

Lab completion and Clean up: Instructor or TA Signature_____

Results

Circuit 1

Metering Results

Channel	Power Supply	Variac Set-point (%)				
		0%	30%	60%	90%	100%
M1	Fixed AC					
M2	Variable AC					
M3	Variable DC					
M4	Fixed DC					

Table 1: Circuit 1 results

Circuit 2

Metering Results

Channel		Resistor Load (Ω)							
		Open	1200	600	400	300	240	200	171
M1	Voltage								
M2	Current								
M3	Power								
M4	Resistance								

Table 2: Circuit 2 results

Data Table Results

Have an instructor or TA verify you were able to save the appropriate .csv file and open it in Excel.

Circuit 2 Sign-off: Instructor or TA Signature_____

Circuit 3

R load Results

V (V)	
I (A)	
f (Hz)	
P (W)	
Q (VAR)	
S (VA)	
PF (-)	
Angle (°)	
Z (Ω)	

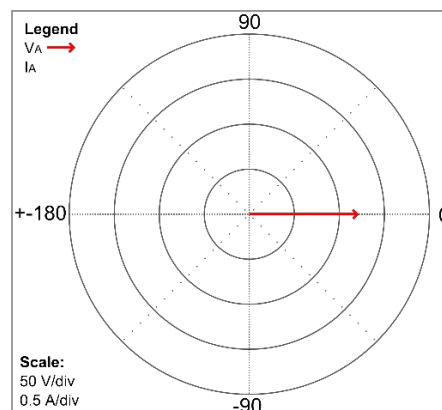
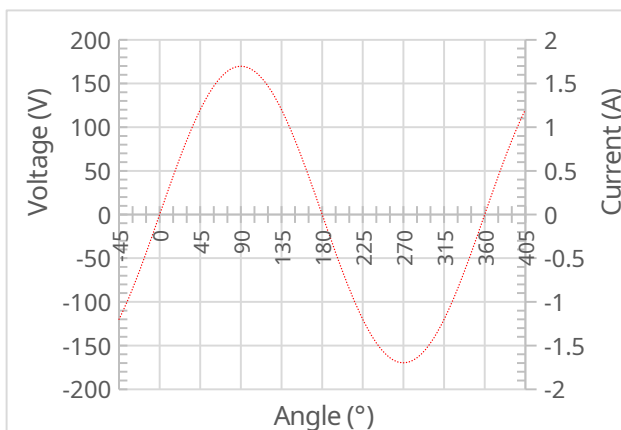


Table 3: R load results

RC Load Results

V (V)	
I (A)	
f (Hz)	
P (W)	
Q (VAR)	
S (VA)	
PF (-)	
Angle (°)	
Z (Ω)	

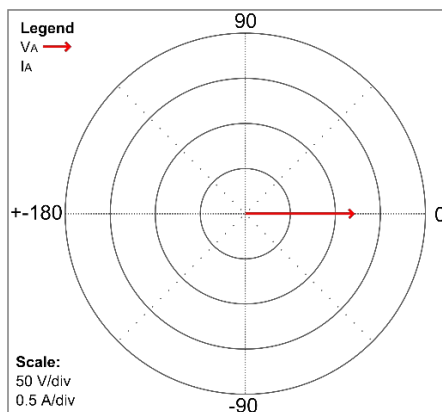
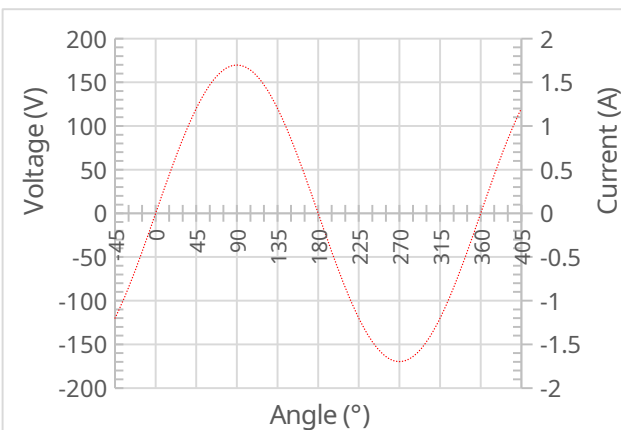


Table 4: RC load results

L Load Results

V (V)	
I (A)	
f (Hz)	
P (W)	
Q (VAR)	
S (VA)	
PF (-)	
Angle (°)	
Z (Ω)	

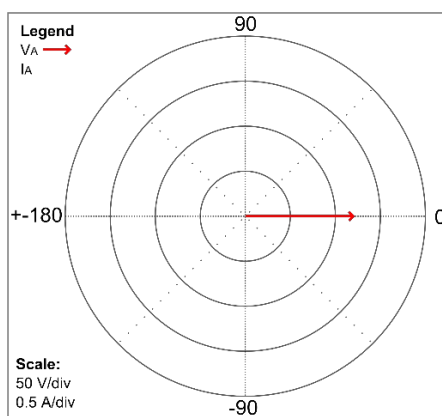
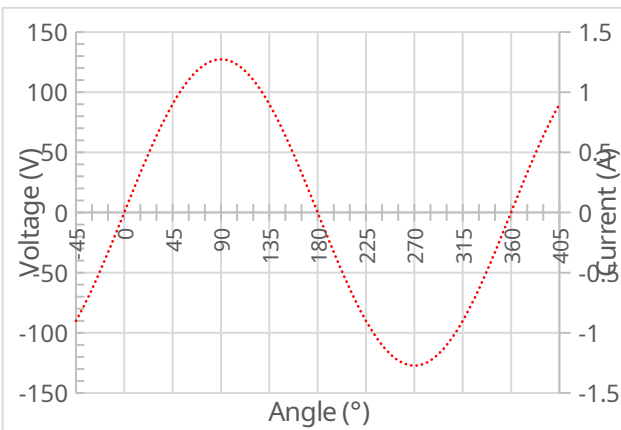
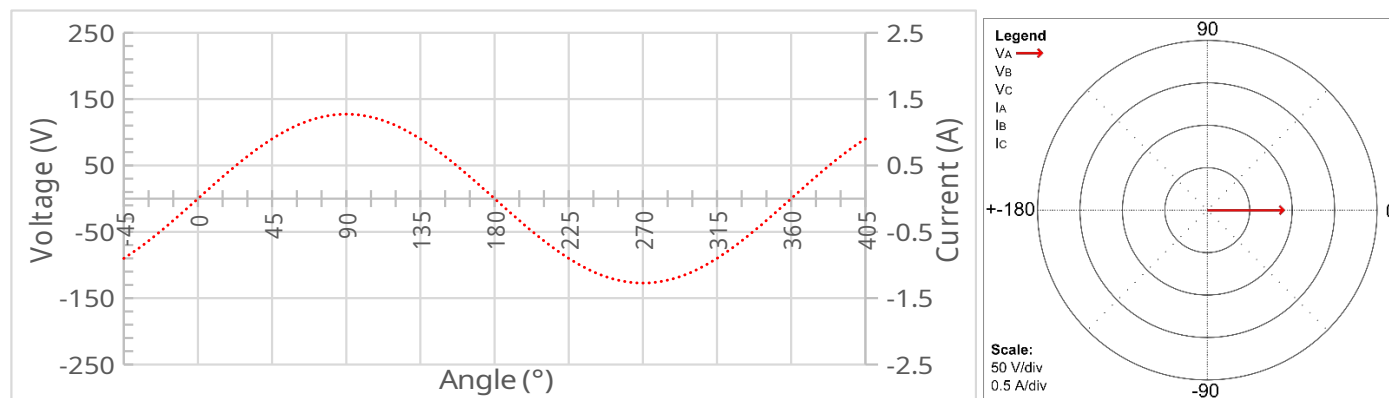


Table 5: L load results

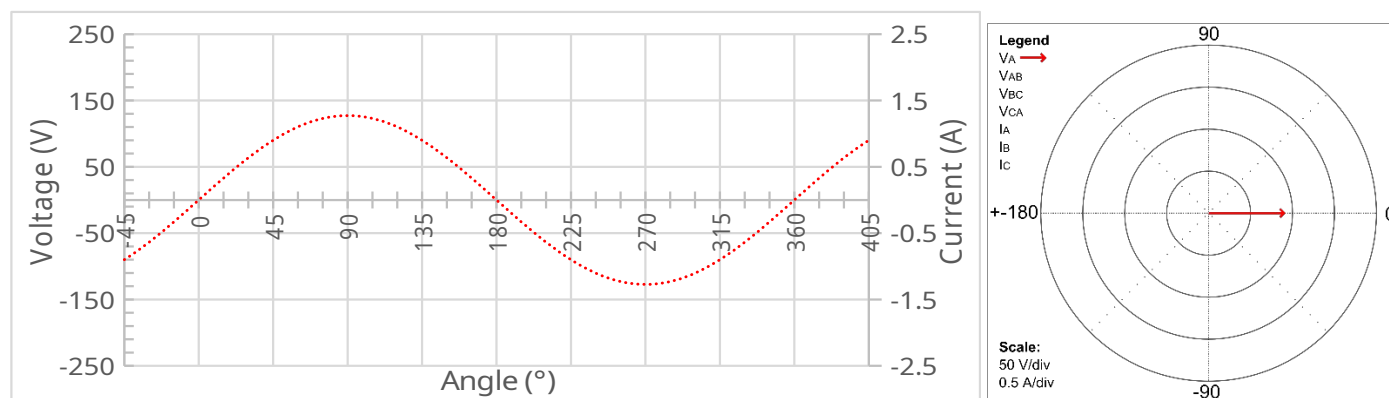
Circuit 3 Sign-off: Instructor or TA Signature _____

Circuit 4

Circuit 4a - R Load Results



Circuit 4b - RL Load Results



Metering Results

Meter	Description (Circuit 4a)	R Load	Description (Circuit 4b)	RL Load
M1	Phase A Voltage		AB line-to-line Voltage	
M2	Phase B Voltage		BC line-to-line Voltage	
M3	Phase C Voltage		CA line-to-line Voltage	
M4	Frequency of system		Phase A Voltage	
M5	Power Factor (3ph)		3Ph Power Factor (from 1ph)	
M6	Phase Shift		Phase Shift (V_{AB} to I_A)	
M7	Phase A Current		Phase A Current	
M8	Phase B Current		Phase B Current	
M9	Phase C Current		Phase C Current	
M10	Real Power (sum)		Real 3Ph Power (from 1ph)	
M11	Reactive Power (sum)		Reactive 3Ph Power (from 1ph)	
M12	Apparent Power (sum)		Apparent 3Ph Power (from 1ph)	
M13	Phase 1 Power		-	-
M14	Phase 2 Power		-	-
M15	Phase 3 Power		-	-

Table 6: Circuit 4 metering results

Circuit 4 Sign-off: Instructor or TA Signature _____