## Off-season goals for PV201L:

- Reframe the class around "best practices" adding mini labs to provide practice
  - Get rid of online homework!
- Create learning objectives for each rotation & supporting docs to help instructors achieve them
- Rework the schedule so it's all possible



## Lab Updates



Welcome			
Monday AM			Location
8:00 - 9:30	Welcome, admin, logistics, and intros	1.5 hr	Student Loun
9:30 - 9:45	Break and distribute ppe	15 min	Student Loun
945 - 10:45	Safety PPT	1 hr	Student Lour
10.45 - 11.00	Safe multimeter use PPT	15 min	Student Lour
11:00 - 11:05	Reset tables for mini labs	5 min	Student Lour
11.05 - 11.20	Mini Lab - Multimeter	15 min	Student Loun
11 20 - 11 50	Mini Lab - Wire stripping	30 min	Student Loun
11:50 - 12:00	Campus tour	15 min	
12:00 - 1:00	Lunch	1 hr	

## **PV201L Rotation Flow**



	Rotation 1:	11 hrs			Rotation 2:	10.25 hrs			Rotation 3:	9.25 hrs		
	Monday PM			Location	Wednesday A	AM		Location	Thursday PM			Location
ge					8.00 - 9.00	Mini Lab - Module Connectors	1 hr	Student Lounge				
ge	1:00 - 1:15	Intros/discussion of rotation plan	15 min	Stations	9 00 - 9 15	Intros/discussion of rotation plan	15 min	Stations	1.15 - 1.30	Intros/discussion of rotation plan	15 min	Stations
ge	1:15 - 1:30	Jobsite Hazard Analysis	15 min	Stations	9 15 - 9 30	Jobsite Hazard Analysis	15 min	Stations	1 30 - 1 45	Jobsite Hazard Analysis	15 min	Stations
ige	1:30 - 1:45	Physical site orientation with demonstration of LOTO procedures	15 min	Stations	9:30 - 9:45	Physical site orientation with demonstration of LOTO procedures	15 min	Stations	1.45 - 2.00	Physical site orientation with demonstration of LOTO procedures	15 min	Stations
ige	1 45 - 2 15	Identify key unique features that set this system apart from others	30 min	Stations	9:45 - 10:15	Identify key unique features that set this system apart from others	30 min	Stations	2:00 - 2:30	Identify key unique features that set this system apart from others	30 min	Stations
nge	2 15 - 3 00	Identify system components, discuss specificiations and functionality.	45 min	Stations	10:15 - 11:00	identify system components, discuss specificiations and functionality.	45 min	Stations	2:30 - 3:00	Identify system components, discuss specificiations and functionality	30 min	Stations
nge	3.00 - 3.15	Discuss racking design considerations	15 min	Stations	11:00 - 11:15	Discuss racking design considerations	15 min	Stations	3:00 - 3:15	Discuss racking design considerations	15 min	Stations
	3:15 - 3:45	Develop plan for system electrical installation (whiteboard power flow diagram, line diagram drawing in notebook)	30 min	Stations	11:15 - 11:45	Develop plan for system electrical installation (whiteboard power flow diagram, line diagram drawing in notebook)	30 min	Stations	3 15 - 3 45	Develop plan for system electrical installation (whiteboard power flow diagram, line diagram drawing in notebook)	30 min	Stations
	3.45 - 4.15	Develop plan for PV module and racking installation/layout	30 min	Stations	11:45 - 12:15	Develop plan for PV module and racking installation/layout	30 min	Stations	3 45 - 4 15	Develop plan for PV module and racking installation/layout	30 min	Stations
	4 15 - 4 45	Install racking/structure/modules	30 min	Stations	12 15 - 1 15	Lunch	1 hr		4.15-4.45	Install racking/structure/modules	30 min	Stations
	4:45 - 5:00	Instructors organize and pack up station with students	15 min	Stations					4.45 - 5.00	Instructors organize and pack up station with students	15 min	Stations
	Tuesday AM				Wednesday F	PM			Friday AM			
	₹00 - 8 30	Mini Lab - Wire management	30 min	Student Lounge								
	8:30 - 9:00	Mini Lab - Torque tools	30 min	Student Lounge								
	9.00 - 9.30	Develop the day's workplan with students including order of operations	30 min	Stations	1.15 - 1.45	Develop the day's workplan with students including order of operations	30 min	Stations	8.00 - 8.15	Develop the day's workplan with students including order of operations	15 min	Stations
	9:30 - 11:45	Install racking/structure/modules	2 25 hrs	Stations	1:45 - 4:00		2.25 hrs	Stations	8:15 - 9:45		1.5 hr	Stations
J	11:45-12:00	Perform appropriate AC, DC, grounding system wiring connections / configuration	15 min	Stations	4:00 - 4:45	Perform appropriate AC, DC, grounding system wining connections / configuration	45 min	Stations	9:45 - 11:30	Perform appropriate AC, DC, grounding system wiring connections / configuration	1.75 hr	Stations
ı	12:00 - 1:00	Lunch	1 hr		4.45 - 5.00	Instructors organize and pack up station with students	15 min	Stations		Perform quality control inspection of completed system		Stations
										Debrief Lunch!	1 hr	
	Tuesday PM				Thursday AM				Friday PM			
					3 00 - 9 00	Mini Lab - Roof Attachements	1 hr					
	1:00 - 3:00	Perform appropriate AC, DC, grounding system wiring connections / configuration	2 hr	Stations	9:00 - 10:30	Perform appropriate AC, DC, grounding system wiring connections / configuration	1.5hr					
	3:00 - 3:30	Perform quality control inspection of completed system	30 min	Stations	10:30 - 11:00	Perform quality control inspection of completed system	30 min		1:00 - 1:30	Mini lab - Performance evaluation	30 min	Stations
	3.30 - 4.00	Commissioning Only - no performs	30 min	Stations	11:00 - 11:30	Commissioning Only - no performance verification	30 min		1:30 - 2:00	Commissioning	30 min	Stations
	4 00 - 4 45	System teardown	45 min	Stations	11:30 - 12:15	System teardown	45 min		2:00-2:30	Mini Lab - System Monitoring	30 min	Stations
	4.45 - 5.00	Instructors organize and pack up station with students	15 min	Stations	12:15 - 1:15	Lunch	1 hr		2 30 3 30	System and ESS Tour	1 hr	All Stations and NTC
		install time	5 hr			install time	4.5hr			install time	3.75 hr	



- System Specific Commissioning Guides
- Updated and separated performance evaluation guide for mini lab
- Updated rotation flow plans for each system including:
  - Learning outcomes
  - Core rotation content
  - System teardown guide
  - Additional technical information
- Possibly meeting our neighbor's cat, Frijole

## PV201L: Other things to look forward to



