

**Seminar Evaluation Results**  
**Introduction to Hydraulics**  
**9/17/2018 - 9/21/2018**  
**Medhat Khalil**  
**Instructor**

	#	Lowest	Highest	Average
<b>Content</b>	16	3.0	5.0	4.9
<b>Technical Level</b>	16	3.0	5.0	4.8
<b>Delivery</b>	16	4.0	5.0	4.9
<b>Time devoted to topics was adequate</b>	16	4.0	5.0	4.6
<b>Allowed opportunity for interaction</b>	16	4.0	5.0	4.8

<b>Did any part of presentation stand out</b>	Very well timed. I never felt rushed or that we were moving too slow. I also enjoyed the questions around the table as it helped solidify what was lectured (1)
	I thought this was the most valuable course I have taken in a long time. Definitely since college but also I wish I had a course like this available to me as an undergrad. The blend of theory and application was exceptional (2)
	Cylinder sector was very good (3)
	A lot of high level information. Valves stood out the most. (4)
	The animations and diagrams were very helpful in gaining understanding of valves operation (5)
	The videos and labs were really helpful and the reception of questions was good (6)
	Understanding the valves with group. Questions and discussion truly helped my understanding (7)
	The round robin questions helped significantly (8)
	I enjoyed all parts of the presentation. I am now able to comprehend the basics of hydraulic systems and more detailed understanding of components that work within (9)
	Very well timed and layered out. Didn't go over or under time (10)
	Explanation of key concepts (11)
	Showing video clips and specific examples of key concepts (12)
	Going around asking questions was a good way to keep everyone involved (13)
<b>What improvements could be made</b>	Nothing I can think of. I found the seminar very beneficial (1)
	I really liked the format of answering questions going around the room. If anything could be added, doing this earlier in the week is the only thing I could recommend (2)
	Spend a bit more time on very basic topics - describing how primers, accumulators work etc. However, I had a very basic understanding of these topics already (3)
	Make timings 8 am to 5 pm to go further into details on specific topics (4)
	None (5)
	I wish there was a little bit more time spent on asking direct questions at specific participants as that was really helpful. (6)
	n/a (7)
	More in class activities, potentially, an ice breaker everyday to have the group get to know each other better (8)

Please Note - numbers in parentheses pertain to number assigned to participant response

<b>What improvements could be made</b>	n/a (10)
	Help walking through answers when asking class questions (12)

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**Seminar**

	#	Lowest	Highest	Average
<b>Purpose and goals were outlined</b>	15	4.0	5.0	4.9
<b>Value of information presented</b>	15	4.0	5.0	4.9
<b>Extent to which information met your needs</b>	15	4.0	5.0	4.9
<b>Laboratories helped explain lecture</b>	15	4.0	5.0	4.8
<b>Would recommend this course to others</b>	15	5.0	5.0	5.0
<b>Would participate in future programs</b>	15	5.0	5.0	5.0
<b>Overall Rating<sup>4</sup></b>	15	4.0	5.0	4.9

<b>Skills or techniques gained</b>	Being able to read circuits manually (1)
	Applicable content include cylinder and pump design (2)
	Reading hydraulic symbols, understanding of components, especially valves. Reading schematics were very useful (3)
	General construction of valves and the over all system archetecture of hydraulics (4)
	Knowledge of schematic symbols (5)
	I now have an overall understanding of the hydraulic systems (6)
	A better understanding of hydraulic systemsso that I can be informed on our hydraulic systems we use in out machines. (easier to communicate with our hydraulic vendors) (7)
	Being able to speak the terminology better (8)
	System troubleshooting (9)
	Better understanding of hydraulic components (10)
	Circuit analysis (12)
	Names of components, how to order (13)
	Basic understanding of hydraulic circuits. How to erad simple schematics/pumps/valves (14)
	Understanding hydraulic circuits logic and becoming familiar with different components (pumps, valves, cylinders). Reading schematics. (15)
	Basic hydraulic knowledge (16)
	<b>What part was least beneficial</b>
Labs (2)	
Some of the 1st day basic concepts were less useful. But still necessary for the class (3)	
The many types of valves and pumps were a little overwhelming (4)	
n/a (5)	
Understanding of valves and pressure drops (6)	
n/a (7)	

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<b>What part was least beneficial</b>	n/a (8)	
	mosquitos @ lab test stand (9)	
	n/a (10)	
	n/a (12)	
	(13)	
	Chapter 1 was mostly review (14)	
	(15)	
<b>What improvements could be made</b>	Somehow being able to showcase the fluids. i.e clear blocks or lit diodes (1)	
	Spend more time going over labs after lab (2)	
	very good broad overview. Some points took a while to sink in. :abs were helpful, but was mostly just following steps (3)	
	I think spending more time on larger system construction would be helpful. (4)	
	Longer class schedule to get more into details (5)	
	With the course info being completely new to me, I would have benefitted from a slower presentation ot more time to fully understand each chapter (6)	
	n/a (7)	
	Break up the day to allow for more lab time and offer more break. (12)	
	(13)	
	- (14)	
	Doing questions going around the room. I think this was a great way to help everyone. I am suggesting to do more of it (15)	
	<b>Other topics</b>	Disruptive technology (1)
		Pump/cylinder design (2)
In depth circuit design partition (3)		
Electrically controlling hydraulics (4)		
2 days of valves and ref sheet for symbols (5)		
Software usage for choosing proper hydraulics, complex stress analysis for moving parts (7)		
More schematic review (14)		

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