

Determining Student Learning Time (SLT) and MQA credit equivalent for the course Basic Physics II, PHY407

Template for determining Learning outcome, learning activities, learning time (in hours) and estimating MQF credit for a course

CO1: State, write and explain the concepts, laws and theories in electrostatics, electricity, magnetism, introductory atomic physics and modern physics.
 CO2: Verbally, visually (pictures & graphs) and algebraically relate and discuss the concepts, laws and theories in electrostatics, electricity, magnetism, light, introductory atomic physics and modern physics.
 CO2: Verify, assess & employ the concepts, laws and theories in electrostatics, electricity, magnetism, light, introductory atomic physics and modern physics to solve qualitative & quantitative problems visually, algebraically and occasionally, numerically.
 CO4: Observe, predict, plan, conduct, analyze and report on scientific investigations in areas of electrostatics and electricity.
 CO5: Show and verbally justify and convince peers and the facilitator, the ability to operate instruments and conducting authentic and meaningful investigations in areas of electrostatics and electricity.
 CO6: Collaborate, motivate and be truthful with team members in both the labs and in the classroom.

No	Modules / Topics / units of study	Traditional (Guided) in class learning activities			Additional (Guided / supervised) Teaching & Learning in and off class Activities (ATLA)							(Managed) Independent Learning Activities						Quiz tests exam.	Total			MQF Credit			
		Lecture	Lab.	Tutorial	ATLA 1 Project		ATLA 2 Talk		ATLA 3 ind train		ATLA X (others)			Assign-ments/Ter m paper	**Self-learning-Lab	**Self-learning-Lec	**Self-learning-Tut		**Self-learning-tests/quiz	**Self-learning-Other	F2F		SLT	F2F	Non F2F
		*F2F	F2F	F2F	F2F	Non F2F	F2F	Non F2F	F2F	Non F2F	F2F	Non F2F	Non F2F	Non F2F	Non F2F	Non F2F	Non F2F		Non F2F	F2F	SLT		F2F	Non F2F	
1	Initial Beliefs diagnostics, Learning Skills & Concept Mapping	2																			2.0	2.0	0.0	0.1	
2	Electrostatics	2	3											2	2						9.0	5.0	4.0	0.2	
3	Electrostatics	2	3										3	2	2		0.51			0.17	12.7	5.2	7.5	0.3	
4	Elect Potential Energy, Elect Potential and Capacitance	2	3											3	2		3			1.00	14.0	6.0	8.0	0.4	
5	Resistance, Resistivity & Ohm's Law	2	3											3	2						10.0	5.0	5.0	0.3	
6	Electric Circuits & Kirchoff's Laws	2	3										3	3	2		0.51		0.17	13.7	5.2	8.5	0.3		
7	Magnetic Field & Magnetic Forces	2	3											3	2						10.0	5.0	5.0	0.3	
8	Magnetic Field & Magnetic Forces	2												3	2		0.51		0.17	7.7	2.2	5.5	0.2		
9	Magnetic force & magnetic field of current-carrying wires	2													2		3		1.00	8.0	3.0	5.0	0.2		
10	Electromagnetic Induction	2													2						4.0	2.0	2.0	0.1	
11	Electromagnetic Induction	2											3		2		0.51		0.17	7.7	2.2	5.5	0.2		
12	Electric Generators, Inductors and Transformers	2													2						4.0	2.0	2.0	0.1	
13	Particles & Waves	2													2		0.51		0.17	4.7	2.2	2.5	0.1		
14	The Nature of Atom	2											3		2		3		1.00	11.0	3.0	8.0	0.3		
Total		28.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	16.0	26.0	0.0	11.6	0.0	3.8	118.4	49.8	68.6	3.0		
Student learning time (SLT) per wk		2.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.9	0.0	0.8	0.0	0.3	8.5	3.6	4.9			

Notes: 1. * F2F = Face-to-Face 2. ** self-learning will include learning from self-learning modules and any additional non F2F hours self-learning and preparation for lecture/ lab, / tutorial and test and evaluation
 Source: Ithnin LAN 25 Jun 2007
 Modified: Dr JJ, FSG, UITM: May 2008