MULTIMEDIA UNIVERSITY

SUMMARY OF INFORMATION ON EACH COURSE/MODULE

1.	Name of Course/Module/Subject	Principles of Physics
2.	Course /Subject Code	PPP0101
3.	Status of Subject	Core
4.	MQF Level/Stage Note : *Certificate – MQF Level 3* *Diploma – MQF Level 4* *Bachelor – MQF Level 6* *Masters – MQF Level 7* *Doctoral – MQF Level 8*	Foundation
5.	Version (state the date of the last Senate approval)	December 2013
6.	Pre-Requisite/Requirement for Registration	NIL
7.	Name(s) of academic/teaching staff	S Dalilla Binti Abd Rahim Ahmad Farimin Bin Ahmad Osman Saufiah Binti Md.Salleh
8.	Semester and Year offered	Trimester 2
9.	Objective of the course/module/subject in the programme : To introduce laws, principles and concepts of Physics particularly Mechanics, Waves and Optics in order to solve related problems.	
10.	Justification for including the subject in the program : To provide students with understanding of fundamental Physics concepts.	

11.

Subject Learning Outcomes :	Domain	Level
LO1: Define the laws, principles and concepts of physics	Cognitive	1
LO2: Explain the laws, principles and concepts of physics related to real life examples	Cognitive	2
LO3: Solve problems related to concepts of Physics	Cognitive	3

12. Mapping of Learning Outcomes to Programme Outcomes :

Learning Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
LO1	X							
LO2	X							
LO3	X	X				X		

13. Assessment Methods and Types :

Method and Type	Description/Details	Percentage
Quizzes	Written exam	20
Test	Written exam	30
Final Exam	Written exam	50

14. Details of Subject

	Topics	Mode of Delivery (eg : Lecture, Tutorial, Workshop, Seminar, etc.) Indicate allocation of SLT (lecture, tutorial, lab) for each subtopic

		Lecture (Hours)	Tutorial (Hours)	SLT (Hours)
	MECHANICS **1. Physical Quantities & Vectors** Introduction to SI units , Basic and Derived quantities, Conversion of Units, Scalar & Vector Quantity, Dimensions, Error and Accuracy and Significant Figures.	4	2	6
	2. Kinematics Definitions of Distance, Displacement, Velocity, Acceleration, Equations of Linear motion.	4	2	6
	3. Dynamics Newton's Laws, Friction Force: Static and Kinetic Friction Force. Linear momentum, Type of collision and Impulse.	4	2	6
	VIBRATION AND WAVES **4. Oscillatory Motion** Simple Harmonic Motion (SHM), Displacement-time graph SHM systems: Mass-spring, Simple pendulum. Energy transformation in SHM, damped and forced oscillation.	4	2	6
	5. Waves Definition of a wave, Properties of waves, Types of waves, Propagation of wave ($v=f\lambda$), Superposition principle, Nodes and Antinodes. Properties of sound wave and Doppler effect.	6	3	9
	LIGHT AND OPTICS **6. Properties of Light** Reflection and Refraction of Light, Snell's Law, Critical Angle, Total Internal Reflection (Fiber Optics), Diffraction of Light, Young's Experiment, Diffraction Grating, Interference of Light.	6	3	9

		28	14	42

15.	Total Student Learning Time (SLT)	Face to Face	Total Guided and Independent Learning
	Lecture	28	56
	Tutorials	14	28
	Quiz	-	5
	Midterm Test	2	10
	Final	2	22
	Sub Total	46	121
	Total SLT	121	
16.	Credit Value	3 (121 / 40 = 3.025)	
17.	Reading Materials :		
	Textbook	Reference Materials	

	Giancoli, D. C. (2013). Physics: Principles with Applications (7th ed.). Pearson Prentice Hall.	Faughn, J. S., &Serway, R. A. (2006).*College physics* (7th ed.). Belmont, CA: Thomson Brooks/Cole. Halliday, D., Resnick, R. & Walker Jearl, (2007). *Fundamentals of physics*.New York, NY: John Wiley & Sons. Walker, J. S. (2004). *Physics*(2nd ed.). Upper Saddle River,NJ: Prentice Hall.

18. Appendix (to be compiled when submitting the complete syllabus for the programme) :

1. Mission and Vision of the University and Faculty
2. Programme Objectives or Programme Educational Objectives
3. Programme Outcomes (POs)
4. Mapping of POs to the 8 MQF domain
5. Mapping of Los to the POs
6. Summary of the Bloom's Taxonomy's Domain Coverage in all the Los in the format below :

Subject	Learning Outcomes (please state the learning 0utcomes)	Bloom's Taxonomy Domain		
		Affective	Cognitive	Psychomotor
ABC1234	Learning Outcome 1			
	Learning Outcome 2			
	Learning Outcome 3			
	Learning Outcome 4			
DEF5678	Learning Outcome 1			
	Learning Outcome 2			
	Learning Outcome 3			
	Learning Outcome 4			

7. Summary of LO to PO measurement
8. Measurement and Tabulation of result for LO achievement
9. MeasurementTabulation of result for PO achievement

Mapping Learning Outcome to Assessment

No.	Assessment	LO1	LO2	LO3
A1	Final Exam (50%)	X (62.5%)	X (62.5%)	X (50.0%)
A2	Quizzes (20%)			X (20.0%)
A3	Test (30%)	X (37.5%)	X (37.5%)	X (30.0%)