



UNIVERSITI TEKNOLOGI MARA

AAR404: BASIC SCIENCE

Course Name (English)	BASIC SCIENCE APPROVED
Course Code	AAR404
MQF Credit	1
Course Description	Illustrate basic knowledge and concept of physics related to building science and technology. Relate the application of physics in relation to built environment.
Transferable Skills	reflective learner
Teaching Methodologies	Lectures, Blended Learning, Tutorial, Presentation
CLO	CLO1 Apply fundamental of basic science for design and built environment. CLO2 Analyse basic human requirement for comfort design
Pre-Requisite Courses	No course recommendations
Topics	
1. Kinematics 1.1) Vector, Scalar and Acceleration 1.2) Motion Graphs and Equation of Motion	
2. Dynamics 2.1) Momentum and Force 2.2) Conservation of Momentum	
3. Energy 3.1) Energy, Work and Power 3.2) Kinetic and Potential Energy	
4. Heat and Temperature 4.1) Temperature and Heat 4.2) Heat Capacity, Specific Heat Capacity, Latent Heat	
5. Heat Transfer 5.1) Conduction, Convection, Radiation and Thermal Conductivity	
6. Elasticity 6.1) Stress, Strain and Shear Strain 6.2) Hooke's Law	
7. Waves and Oscillations 7.1) Types and characteristics of waves and oscillations	
8. Light 8.1) Law of Reflection and Refraction (Snell's Law) 8.2) Refractive Index, Critical Angle and Apparent Depth	
9. Sound and Electricity 9.1) Characteristics and propagation of sound 9.2) Doppler Effect 9.3) 9.4) Simple DC and AC circuits 9.5) Ohm's Law and Kirchoff's Law 9.6) Charge, Energy and Power	

Assessment Breakdown	%
Continuous Assessment	40.00%
Final Assessment	60.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Test	Answer all questions	20%	CLO1
	Test	Answer all questions	20%	CLO1

Reading List	Reference Book Resources
	<ul style="list-style-type: none"> • D.D Chiras 2009, <i>Environmental Science</i>, Jones and Bartlett Publishers • D.Blake & R.Roson 2008, <i>Physical principles of meteorology and enviro</i>, World Scientific • Guiseppa, D.C 2001, <i>Architecture and science</i> , London,Wiley Academics

Article/Paper List
This Course does not have any article/paper resources

Other References
This Course does not have any other resources