



UNIVERSITI TEKNOLOGI MARA

SPP611: ELECTRICITY, MAGNETISM AND WAVE

Course Name (English)	ELECTRICITY, MAGNETISM AND WAVE APPROVED
Course Code	SPP611
MQF Credit	3
Course Description	This course is designed for the preparation primary school teacher and specifically intended for primary school teacher with the knowledge of basic physic with simple algebra application. Among the chapter included are Electricity, Magnetism, Wave and their relevance with the daily phenomena. Other than that the normal physic misconception that student normally have about the topic is discussed and several teaching technique is emphasized for the primary teacher to be confident whenever teaching something related to physical science.
Transferable Skills	Science process skill
Teaching Methodologies	Lectures, Blended Learning, Web Based Learning, Directed Self-learning
CLO	CLO1 Describe the basic concept of electricity, magnetism, and wave. CLO2 Relate physics concept to mathematics. CLO3 Relate physics concept to daily phenomena. CLO4 Discuss about physics misconceptions in certain chapter. CLO5 Increase in confidence in teaching physical science theme to primary school.
Pre-Requisite Courses	No course recommendations
Topics	
1. Electrostatic 1.1) Introduction to electrostatic 1.2) Introduction to electric fields	
2. Electric Current and Circuit 2.1) Introduction to charge flow 2.2) Introduction to series and parallel circuits 2.3) Introduction to electrical energy and power 2.4) Misconception related to electricity	
3. Magnetism 3.1) Introduction to magnetism 3.2) Misconception related to Magnetism	
4. Electromagnetism 4.1) Introduction to magnetic effect of a current - carrying conductor 4.2) Force on a current - carrying conductor in a magnetic field 4.3) Introduction to electromagnetic induction 4.4) Misconception related to electromagnetism	
5. Wave 5.1) Introduction to wave 5.2) Reflection of waves 5.3) Refraction of waves 5.4) Introduction to interference of waves 5.5) Misconception related to wave	
6. Sound wave & Light wave 6.1) Sound wave & Light wave 6.2) electromagnetic waves	

Assessment Breakdown	%
Continuous Assessment	60.00%
Final Assessment	40.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Discussion	Mark will be given based on student answer or discussion to the question given in the i-Learn	5%	CLO1 , CLO3
	Group Project	At least 1 activity will be done in classroom setting and the result (with the report) will be count as project one.	10%	CLO1 , CLO3 , CLO4 , CLO5
	Presentation	A presentation of certain activities will be given (via i-Learn or in class) by the student in group.	15%	CLO1 , CLO3 , CLO4 , CLO5
	Quiz	Quiz or Online Quiz. A set of test paper and student should do it and sent it via email or in a classroom	10%	CLO1 , CLO3
	Test	Test will be done in classroom	20%	CLO1 , CLO2 , CLO3

Reading List	Recommended Text	<ul style="list-style-type: none"> • Griffith, W.T. 2004, <i>The Physics of Everyday Phenomena: A Conceptual Introduction to Physics</i>, 4th Ed., McGraw Hill New York • Abruscato, J. 2004, <i>Teaching Children Science: A Discovery Approach</i>, 6th Ed., Allyn & Bacon • Bloomfield, L.A. 2001, <i>How Things Work: The Physics of Everyday Life</i>, 2th Ed., John Wiley New York
	Reference Book Resources	<ul style="list-style-type: none"> • Hewitt, P.G 2010, <i>Conceptual Physics</i>, 11th Ed., Pearson Education Inc Illinois
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	