

Sesi Akademik <i>Academic Session</i>	2020/2021
Semester/Penggal <i>Semester/Term</i>	2
Kod Kursus <i>Course Code</i>	KIE2007
Tajuk Kursus <i>Course Title</i>	Elektromagnet Asas <i>Basic Electromagnetics</i>
Bahasa Pengantar <i>Medium of Instruction</i>	Bahasa Inggeris <i>English</i>
Rujukan Utama <i>Main Reference</i>	<ol style="list-style-type: none"> <li>1. Field and Wave Electromagnetics (2nd Edition), David K. Cheng</li> <li>2. Fundamentals of Applied Electromagnetics (6<sup>th</sup> Ed), Ulaby, Michielsson, Ravaoli.</li> <li>3. Elements of Electromagnetics (5<sup>th</sup> Edition), Matthew O. Sadiku, 2009.</li> </ol>
Strategi Pembelajaran <i>Learning Strategies</i>	Kuliah, Pembelajaran Berdikari <i>Lectures, Independent learning</i>
Masa Pembelajaran Pelajar <i>Student Learning Time</i>	Bersemuka / <i>Face to face</i> : 45 jam/hours Tidak Bersemuka / <i>Non Face to face</i> : 0 jam/hour Masa Persediaan Pelajar / <i>Student Preparation Time</i> : 75 jam/hours
Kemahiran Boleh Pindah <i>Transferable Skills</i>	<i>Problem Solving Skills, Analytical Skills</i>
Pensyarah / <i>Lecturer</i>	Prof Madya Dr. Suhana Mohd Said
Bilik / <i>Room</i>	Level 2, Department of Electrical Engineering, Faculty of Engineering
Telefon/e-mel <i>Telephone/e-mail</i>	03 - 7967 5399/ smsaid@um.edu.my
Sesi Kuliah / <i>Lecture Session:</i>  Hari/Masa / <i>Day/Time</i>  Tempat / <i>Venue</i>	Rujuk jadual waktu <i>Refer to the lecture timetable</i>
Sesi Tutorial/Amali: <i>Tutorial/Practical Session:</i>  Hari/Masa / <i>Day/Time</i>  Tempat / <i>Venue</i>	Rujuk jadual waktu <i>Refer to the lecture timetable</i>
Perincian Pemberatan Penilaian <i>Detail of Assessment Weightage</i>	Penilaian Berterusan / <i>Continuous Assessment</i> : 40%  Peperiksaan Akhir / <i>Final Examination</i> : 60%

**Jadual Pengajaran / Teaching Schedule**

Minggu Week	Topik & Aktiviti Topic & Activities	Rujukan References
1	<i>Introduction, review of vector operation</i>	<i>Ref [1], lecture note</i>
2	<i>Orthogonal coordinate systems, point and vector conversion</i>	<i>Ref [1], lecture note</i>
3	<i>Gradient, divergence and curl</i>	<i>Ref [1], lecture note</i>
4	<i>Postulates of electrostatic, Coulomb's law, electrical field</i>	<i>Ref [1], lecture note</i>
5	<i>Gauss law applications, Potential and Electrical Materials</i>	<i>Ref [1], lecture note</i>
6	<i>Boundary conditions for electrical materials</i>	<i>Ref [1], lecture note</i>
7	<i>Capacitors, capacitance and method of images</i>	<i>Ref [1], lecture note</i>
8	<i>Electrostatic energy and forces. Laplace and Poisson equations</i>	<i>Ref [1], lecture note</i>
9	<i>Current, current density and resistance</i>	<i>Ref [1], lecture note</i>
10	<i>Continuity, power, Joule's law</i>	<i>Ref [1], lecture note</i>
11	<i>Introduction to magnetostatics. Biot Savart law, Ampere's law</i>	<i>Ref [1], lecture note</i>
12	<i>Magnetic materials and magnetisation</i>	<i>Ref [1], lecture note</i>
13	<i>Inductors and inductance</i>	<i>Ref [1], lecture note</i>
14	<i>Magnetostatic energy, force and torque</i>	<i>Ref [1], lecture note</i>