



Sesi Akademik <i>Academic Session</i>	2020/2021
Semester/Penggal <i>Semester/Term</i>	1
Kod Kursus <i>Course Code</i>	KIE3006
Tajuk Kursus <i>Course Title</i>	Sistem Kawalan <i>Control System</i>
Bahasa Pengantar <i>Medium of Instruction</i>	Bahasa Inggeris <i>English</i>
Rujukan Utama <i>Main Reference</i>	1. R. C. Dorf and R H Bishop, <i>Modern Control System</i> , 13th Edition, Prentice Hall, 2017 2. N. S. Nise, <i>Control System Engineering</i> , 6th Edition, John Wiley & Sons, 2011
Strategi Pembelajaran <i>Learning Strategies</i>	Kuliah dan Tutorial <i>Lectures and Tutorials</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>	Simulation (MATLAB software)
Pensyarah / <i>Lecturer</i>	Dr. Marizan Mubin / Prof. Madya Ir. Dr. Mahidzal Dahari
Bilik / <i>Room</i>	Tingkat 2, Mercu Kejuruteraan
Telefon/e-mel <i>Telephone/e-mail</i>	03-79675260 , marizan@um.edu.my 03-79676806, mahidzal@um.edu.my
Sesi Kuliah / <i>Lecture Session:</i>	Rujuk kepada myum.um.edu.my.
Hari/Masa / <i>Day/Time</i>	<i>Refer to myum.um.edu.my.</i>
Tempat / <i>Venue</i>	
Sesi Tutorial/Amali: <i>Tutorial/Practical Session:</i>	Rujuk kepada myum.um.edu.my.
Hari/Masa / <i>Day/Time</i>	<i>Refer to myum.um.edu.my.</i>
Tempat / <i>Venue</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	Pengenalan kepada system kawalan <i>Introduction to control systems</i>	Ruj [1, 2], nota kuliah <i>Ref [1, 2], lecture note</i>
2	Model matematik bagi sistem: Persamaan pembezaan, penghampiran lurus <i>Mathematical modeling of system: Differential equation, linear approximation</i>	Ruj [1, 2], nota kuliah <i>Ref [1, 2], lecture note</i>
3	Model matematik bagi sistem: Jelmaan Laplace, rangkap pindah <i>Mathematical modeling of systems: Laplace transforms and transfer functions</i>	Ruj [1, 2], nota kuliah <i>Ref [1, 2], lecture note</i>
4	Gambarajah blok dan graf aliran isyarat <i>Block diagrams and signal flow graphs</i>	Ruj [1, 2], nota kuliah <i>Ref [1, 2], lecture note</i>
5	Model pembolehubah keadaan <i>State variable models</i>	Ruj [1, 2], nota kuliah <i>Ref [1, 2], lecture note</i>
6	Prestasi sistem kawalan suap balik <i>Performance of feedback control system</i>	Ruj [1, 2], nota kuliah <i>Ref [1, 2], lecture note</i>
7	Prestasi sistem kawalan suap balik <i>Performance of feedback control system</i>	Ruj [1, 2], nota kuliah <i>Ref [1, 2], lecture note</i>
8	Kestabilan sistem suap-balik lurus <i>The stability of linear feedback system</i>	Ruj [1, 2], nota kuliah <i>Ref [1, 2], lecture note</i>
9	Kaedah londar punca <i>The root locus method</i>	Ruj [1, 2], nota kuliah <i>Ref [1, 2], lecture note</i>
10	Kaedah sambutan frekuensi <i>Frequency response method</i>	Ruj [1, 2], nota kuliah <i>Ref [1, 2], lecture note</i>
11	Kaedah sambutan frekuensi <i>Frequency response method</i>	Ruj [1, 2], nota kuliah <i>Ref [1, 2], lecture note</i>
12	Kestabilan dalam domain frekuensi <i>Stability in frequency domain</i>	Ruj [1, 2], nota kuliah <i>Ref [1, 2], lecture note</i>
13	Rekabentuk kawalan melalui sambutan frekuensi <i>Control design via frequency response</i>	Ruj [1, 2], nota kuliah <i>Ref [1, 2], lecture note</i>
14	Rekabentuk kawalan melalui sambutan frekuensi <i>Control design via frequency response</i>	Ruj [1, 2], nota kuliah <i>Ref [1, 2], lecture note</i>