UNIVERSITI MALAYA	**MAKLUMAT KURSUS UNTUK SEMESTER/PENGGAL SEMASA** ***COURSE INFORMATION FOR CURRENT SEMESTER/TERM***

Sesi Akademik *Academic Session*	2020/2021
Semester/Penggal *Semester/Term*	1
Kod Kursus *Course Code*	KIE4023
Tajuk Kursus *Course Title*	Sistem Kawalan Digital *Digital Control System*
Bahasa Pengantar *Medium of Instruction*	Bahasa Inggeris *English*
Rujukan Utama *Main Reference*	1. Charles L. Phillips, Troy Nagle, Aranya Chakrabortty, *Digital Control System Analysis and Design*, Prentice Hall, 4th Edition, 2015 2. Katsuhiko Ogata, *Discrete-Time Control Systems*, Prentice Hall, 2nd Edition, 1995 3. Benjamin C. Kuo, *Digital Control System*, Oxford University Press, 2nd Edition, 1995
Strategi Pembelajaran *Learning Strategies*	Kuliah, Seminar, dan Perbincangan Kumpulan *Lectures, Seminar and Group Discussion*
Masa Pembelajaran Pelajar *Student Learning Time*	Bersemuka / *Face to face* : 31 jam/*hours* Tidak Bersemuka / *Non Face to face*: 0 jam/*hour* Masa Persediaan Pelajar / *Student Preparation Time*: 49 jam/*hours*
Kemahiran Boleh Pindah Transferable Skills	Kemahiran pembentangan/*Presentation skill* Kemahiran penulisan teknikal/*Technical writing skill*
Pensyarah / *Lecturer* Bilik / *Room* Telefon/e-mel *Telephone/e-mail*	Dr Marizan Mubin No. 1, Level 2, Engineering Summit marizan@um.edu.my
Sesi Kuliah / *Lecture Session:* Hari/Masa / *Day/Time* Tempat / *Venue*	Rujuk kepada myum.um.edu.my. *Refer to* myum.um.edu.my.
Sesi Tutorial/Amali: *Tutorial/Practical Session:* Hari/Masa / *Day/Time* Tempat / *Venue*	Tiada/*No*
Perincian Pemberatan Penilaian *Detail of Assessment Weightage*	Penilaian Berterusan / *Continuous Assessment* : 40% Peperiksaan Akhir / *Final Examination* : 60%

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Jadual Pengajaran / *Teaching Schedule*

Minggu *Week*	Topik & Aktiviti *Topic & Activities*	Rujukan *References*
1	Pengenalan kepada Sistem kawalan digital *Introduction to digital control system*	*See Main Reference*
2	Penjelmaan Z *Z-transform*	*As the above*
3	Rangkap pindah, gambarajah blok dan graf aliran isyarat *Transfer function,block diagrams and signal flow graphs*	*As the above*
4	Analisa pembolehubah keadaan *State variable analysis*	*As the above*
5	Pensampelan dan data-hold *Sampling and data-hold*	*As the above*
6	Gelung-terbuka sistem masa-diskrit *Open-loop discrete-time system*	*As the above*
7	Gelung tertutup sistem masa-diskrit *Closed-loop discrete-time system*	*As the above*
8	Analisa domain-masa dan domain-z *Time-domain and Z-domain analysis*	*As the above*
9	Analisa domain-masa dan domain-z *Time-domain and Z-domain analysis*	*As the above*
10	Kestabilan sistem kawalan lelurus *Stability of linear control system*	*As the above*
11	Kestabilan sistem kawalan lelurus *Stability of linear control system*	*As the above*
12	Analisa domain frekuensi *Frequency domain analysis*	*As the above*
13	Rekabentuk pengawal digital *Digital Controller Design*	*As the above*
14	Rekabentuk pengawal digital *Digital Controller Design*	*As the above*