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*Contents of this Pro Forma shall not be changed without the Senate's approval for items indicated with \*. Changes to the other items can be approved at the Academy/Faculty/Institution/Centre level.*

	<b>Versi Bahasa Malaysia Malay Version</b>	<b>Versi Bahasa Inggeris English Version</b>
Akademi/Fakulti/Institut/Pusat <i>Academy/Faculty/Institute/Centre</i>	Fakulti Kejuruteraan	<i>Faculty of Engineering</i>
Jabatan <i>Department</i>	Jabatan Kejuruteraan Elektrik	<i>Department of Electrical Engineering</i>
Nama Program Akademik <i>Name of Academic Programme</i>	Sarjana Muda Kejuruteraan Elektrik	<i>Bachelor of Electrical Engineering</i>
Kod Kursus* <i>Course Code*</i>	KIE3007	<i>KIE3007</i>
Tajuk Kursus* <i>Course Title*</i>	Pemprosesan Isyarat Digit	<i>Digital Signal Processing</i>
Kredit* <i>Credit*</i>	3	3
Masa Pembelajaran Pelajar (SLT) <i>Student Learning Time (SLT)</i>	120	120
Prasyarat/Keperluan Minimum Kursus <i>Course Pre-requisite(s)/Minimum Requirement(s)</i>	Tiada	No
Hasil Pembelajaran Kursus* <i>Course Learning Outcomes*</i>	Di akhir kursus ini, pelajar dapat: 1) Menganalisis sistem LTI menggunakan persamaan beza, DTFT dan jelmaan-Z 2) Melaksanakan analisis Fourier isyarat menggunakan Fourier diskret mengubah 3) Mereka penapis digital jenis FIR dan IIR.	<i>At the end of the course, students are able to:</i> 1) <i>Analyze the LTI systems using difference equations, DTFT and Z-transforms.</i> 2) <i>Perform Fourier analysis of signals using the discrete Fourier transform</i> 3) <i>Design FIR and IIR type digital filters.</i> 4) <i>Apply DSP in image and speech processing</i>

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	4) Mengaplikasikan DSP dalam imej dan proses percakapan	
Kemahiran Insaniah <i>Soft Skills</i>	Pembelajaran Berterusan dan Pengurusan Maklumat (LL1, LL2)	<i>Lifelong Learning and Information Management (LL1, LL2)</i>
Sinopsis Kandungan Kursus <i>Synopsis of Course Contents</i>	Takrif masa berterusan (analog), masa diskrit dan isyarat digit, siri Fourier dan jelmaan Fourier dibincang. Sistem pemprosesan isyarat masa tak varians masa diskrit diliputi secara terperinci dan aplikasi pelingkar domain masa dan jelmaan Fourier masa diskrit (DTFT) dalam menganalisa sistem LTI turut dibincang. Rekabentuk penapis digit FIR dan pengenalan kepada jelmaan-Z dan penapis masa diskrit jenis IIR diliputi secara terperinci. Jelmaan Fourier diskrit (DFT) dan pelaksanaannya dengan mengguna jelmaan Fourier pantas turut diliputi.	<i>The definition of continuous time (analogue), discrete time and digital signals, Fourier series and Fourier Transform is discussed. The discrete time linear time-invariant (LTI) signal processing systems and the application of the time-domain convolution and the Discrete Time Fourier transform (DTFT) in analyzing LTI systems are also discussed. The design of FIR digital filters and introduction to z-transforms and IIR type discrete time filters are covered in detail. The Discrete Fourier Transform (DFT) and the implementation of the DFT by the fast Fourier Transform is also covered..</i>
Pemberatan Penilaian* <i>Assessment Weightage*</i>	Penilaian Berterusan: 40% Peperiksaan Akhir: 60%	<i>Continuous Assessment: 40% Final Examination: 60%</i>
Kaedah Maklum Balas Tentang Prestasi <i>Methodologies for Feedback on Performance</i>	Maklumbalas secara dalam talian dan komen secara lisan semasa seminar.	<i>Online feedback and oral comments after Seminar.</i>
Kriteria Dalam Penilaian Sumatif <i>Criteria in Summative Assessment</i>	Sila rujuk Kaedah-Kaedah Universiti Malaya (Pengajian Ijazah Pertama) 2017 dan Peraturan-Peraturan Universiti Malaya (Pengajian Ijazah Pertama) 2017	<i>Please refer to the University Of Malaya (First Degree Studies) Rules 2017 And University Of Malaya (First Degree Studies) Regulations 2017</i>