



Sesi Akademik <i>Academic Session</i>	2020/2021
Semester/Penggal <i>Semester/Term</i>	1
Kod Kursus <i>Course Code</i>	KIE4015
Tajuk Kursus <i>Course Title</i>	Komunikasi Optik <i>Optical Communication</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">1. Govind Agrawal, "Fibre-optic Communication Systems", Wiley, 2002.2. John M. Senior, "Optical Fiber Communications: Principles and Practices", Prentice Hall, 2009.3. J. Palais, "Fiber Optic Communications", Prentice Hall, 2005.4. D.K. Mynbaev, L.L. Scheiner, "Fiber-optic Communications Technology", Prentice Hall, 2001.
Strategi Pembelajaran <i>Learning Strategies</i>	Kuliah, Seminar, dan Perbincangan Kumpulan <i>Lectures, Seminar and Group Discussion</i>
Masa Pembelajaran Pelajar <i>Student Learning Time</i>	Bersemuka / <i>Face to face</i> : 31 jam/hours Tidak Bersemuka / <i>Non Face to face</i> : 0 jam/hour Masa Persediaan Pelajar / <i>Student Preparation Time</i> : 49 jam/hours
Kemahiran Boleh Pindah <i>Transferable Skills</i>	Kemahiran Analisa <i>Analytical Skills</i>
Pensyarah / <i>Lecturer</i>	Prof Dr Sulaiman Wadi Harun
Bilik / <i>Room</i>	Tingkat 1, Jabatan Kejuruteraan Elektrik
Telefon/e-mel <i>Telephone/e-mail</i>	03-7967 2665 /swharun@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>	Tiada
Hari/Masa / <i>Day/Time</i>	No
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	Teori elektromagnet bagi pandu gelombang optik dalam gentian <i>Electromagnetic theory of optical waveguiding in a fibre</i>	<i>Ref [1-4], lecture note</i>
2	Multimod dan gentian mod tunggal <i>Multimode vs. single mode fibre</i>	<i>Ref [1-4], lecture note</i>
3	Sumber, pengesan <i>Sources, detector</i>	<i>Ref [1-4], lecture note</i>
4	Penguat optik <i>Optical amplifier</i>	<i>Ref [1-4], lecture note</i>
5	Serakan dan pelemahan <i>Dispersion and attenuation</i>	<i>Ref [1-4], lecture note</i>
6	Pertimbangan lebar jalur <i>Bandwidth consideration</i>	<i>Ref [1-4], lecture note</i>
7	Fabrikasi gentian optik <i>Optical fibre fabrication</i>	<i>Ref [1-4], lecture note</i>
8	Pemancar dan penerima <i>Transmitters and receiver</i>	<i>Ref [1-4], lecture note</i>
9	Rangkaian gentian optik <i>Fibre optic networks</i>	<i>Ref [1-4], lecture note</i>
10	Pengkodan digit <i>Digital coding</i>	<i>Ref [1-4], lecture note</i>
11	Penghantaran data berbilang saluran <i>Multichannel data transmission</i>	<i>Ref [1-4], lecture note</i>
12	Teknik-teknik pembetulan ralat <i>Error correction techniques</i>	<i>Ref [1-4], lecture note</i>
13	Pengurusan serakan <i>Dispersion management</i>	<i>Ref [1-4], lecture note</i>
14	Ketidaklinearan dalam gentian optik <i>Nonlinearities in optical fibre</i>	<i>Ref [1-4], lecture note</i>