

Major Programme:	Bachelor of Science in Electrical and Computer Engineering									
Course Type:	☑ CM – Compulsory Major □ CPE – Community and	d Peer Ed	ducation   GE – General Education	n □ MI – Minor						
	□ RE – Required Elective □ L&S – Languages and	$\Box$ FE – Free Elective								
GE Area in 2017/2018 model (applicable to students admitted in academic year 2017/2018 onwards)										
□ Science and Techno	ology, FHS	□ So	□ Society and Behaviour, FSS							
□ Literature and Hum	nanities, FAH	□ Global Awareness, FSS								
Equivalent to 2011/2012 GE model (applicable to students admitted in academic year 2016/2017 or before)										
□ Area 1 – English L	anguage	☐ Area 8 – World Histories and Cultures								
□ Area 2 – Chinese/F	oreign Language	□ Area 9 – Macao, China and other Societies								
□ Area 3 – Communi	cation	□ Ar	□ Area 10 – Values, Ethics and Meaning of life							
□ Area 4 – Mathemat	cics/Quantitative Reasoning	□ Area 11 – Physical Education								
□ Area 5 – Informatio	on Technology and Knowledge Society	☐ Area 12 – Visual and Performing Arts								
□ Area 6 – Physical S	Science and the World	□ Area 13 – University Life								
□ Area 7 – Life Science, Health and the Human Condition										
Course Title: (in English, Chinese and	Power Systems Analysis									
	電力系統分析									
Portuguese)	Análise de Sistemas de Potência		C 1': II ':							
Course code	ECEN3008		Credit Units:	3						
Duration:	✓ Semester Course □ Yearly Course		Suggested Year of Study:	Year 3						
Grading System:	✓ Letter Grade □ P/NP		Pre-requisite: (if any)	None						
Medium of Instructio	n:	English								
Text Book and "Power System Analysis", John Grainger, William Stevenson Reference										
Course Description:	This course provides fundamental knowledge on power system. It includes calculation on line parameters, line models, admittance matrix calculation, load flow calculation, symmetrical networks, machine model for short circuit calculation, symmetrical and asymmetrical short circuit calculation and state estimation.									
Course Content	1. Introduction to Power System 2. Parameters Calculation for Transmission Line/Cable 3. Transmission Line Models 4. Power Flow Analysis 5. Reactive Power Compensation/Power Factor Correction 6. Fault Analysis 7. Introduction to Power System Stability									

	8. Introduction to Power System Protection													
Course Intended Learning Outcomes (CILO):	CILO 1: Ability to apply knowledge of mathematics, science and engineering. CILO 2: Ability to identify, formulate and solve engineering problems. CILO 3: Ability to use the techniques, skills and modern engineering tools necessary for engineering practice. CILO 4: Ability to design and conduct experiments.													
Major Assessment Methods:	Case	Role Playing		Individual project / paper	Group project / paper	Group discussions	Writing Assignment	Exercises & problems	Service learning	Internship	Field study	Company visits	Reading & Writing Assessments / tests	Listening & Oral Assessments / tests
Assignment(s) 40%					1			1						
Quiz 10%								1					1	
Final 50%													1	