澳門大學
UNIVERSIDADE DE MACAU
UNIVERSITY OF MACAU

持續進修中心
Centro de Educação Contínua
Centre for Continuing Education

Diploma in Electrical Engineering

General Description and Objectives

In response to practical needs of professional development, CCE is decided to launch a diploma programme in electrical engineering. This programme is prerequisite for the Higher Diploma in Electrical Engineering which will be launched later. The Higher Diploma in Electrical Engineering has five 36-hour courses in total of 180 hours.

*The Higher Diploma in Electrical Engineering is subject to approval and sufficient number of enrolled students.

On the completion of this programme, the students will be able to:

Have the ability to think in a critical and evaluative manner and to consider a broad perspective, in order to solve generic technical and engineering problems; Have a thorough ground in the fundamentals of mathematics and science in electrical and electronics engineering; Perform a range of electrical engineering duties with minimum supervision.

This diploma is built on a broad-based foundation in electrical, electronic and power engineering. Students need to complete five 36-hour courses in part-time evening mode.

Modules of Diploma	Lecture Hours
• Circuit Analysis	36 hours
• Fundamental Electronics	36 hours
• Engineering Mathematics	36 hours
• Probability and Statistics	36 hours
• Electric Machines	36 hours

課程編號: 1907320234-0
2017-2019 “持續進修發展計劃”
獲批准之項目，相關報讀詳情請翻閱背頁

網址： http://cce.um.edu.mo/ 查詢電話： 8822-4545 電郵查詢： cce.enquiry@um.edu.mo 圖文傳真： 2883-8321

Updated on ： 2019 年 10 月 29 日

Payment Information

Application Fee	MOP 100.00 (this fee is not included in the DSEJ Continuing Education Scheme, it can be settled by cheque, cashier' s order or VISA/MASTER card)
Payment Method	1. By cheque/cashier' s order, payable to "University of Macau" 2. By VISA/MASTER card (online payment available) 3. By DSEJ Continuing Education Scheme (if applicable), applicant must present a valid Macau ID card for application in person
Documents required	1. Application form 2. 1 copy of ID card/other appropriate identification documents 3. Academic Qualification
Address	The Centre for Continuing Education Ground Floor, BOC Centennial Building, University of Macau, E3, Avenida da Universidade, Taipa, Macau
Office Hours	Mon — Fri 9:30 — 21:00; Sat 10:00-17:00; Sun 9:30-13:00 (Closed on Macao Public Holidays)

【Application will be closed once all seats are filled】

For seat reservation, please fill out the online application form and you will be confirmed by email.

【Alumni and Retired Staff Privilege】Cardholders of "UM Alumni Card" or "Retired Staff Card" can enjoy a 20% discount on tuition fee. Quota for this offer is limited for each course and is available on a first-come-first-served basis. This privilege cannot be used with DSEJ Continuing Education Scheme. CCE reserves the right to make final judgment on the dispute and otherwise in respect of this offer. For any enquiries, please contact us.

【校友及退休職員優惠】凡持有由本校發出之「澳門大學校友卡」或「澳大退休職員證」，報讀此課程可享學費 8 折優惠，每課程均設優惠限額，先到先得，額滿即止，恕不另行通知。此優惠不能與持續進修發展計劃進修資助同時使用。本中心保留對此優惠的最終決定權。如有疑問請致電查詢。

Notice

Application Deadline	2019/11/29
Lecture Date (s) / Time	2019/12/04 — 2020/06/12 Tuesday, Wednesday, Thursday & Friday 19:00 — 22:00
Requirement	A candidate must have passed senior high school standard or equivalent
Assessment Method	The assessment is based on assignment and examination
Instructor and Instructing Language	From University of Macau and CEM; English, supplemented with Cantonese
Instructing Materials	English teaching materials
Lecture Hours	180
Tuition Fee	MOP23,000
Venue	University of Macau

1. Eligibility of DSEJ Continuing Education Scheme: Macao residents who are 15 years old or above, and are beneficiaries of DSEJ Continuing Education Scheme.
2. More information of DSEJ Continuing Education Scheme, please visit DSEJ' s website: www.dsej.gov.mo/pdac/2017/index.php or contact them at Tel: 2842 5199.
3. The Centre reserves the right to amend the course details.
4. The Centre reserves the right to postpone or cancel the course in case of insufficient enrolments. Refund information is available in our website: http://www.umac.mo/cce/notice.html.
5. Certificate: Certificate will be issued to those students who have attended 80% of the entire programme and got a passing grade in the examination of each course. If examination is exempted for the course, attendance certificate will be issued to those students who have attended 80% of the entire programme. If a student who is absent from class and applies for justifiable absence, he/she must provide valid reasons and supporting documents. Medical certificate is required for health reason. Applicant should submit the application form to the Centre within 10 days after the first day of class absence. Applications are subject to the approval of the Centre.
6. For voluntary withdrawal, applicants have to follow the withdrawal regulations of the Centre. More information is available in our website: http://www.umac.mo/cce/notice.html.

Circuit Analysis (36 hours)

Circuit Analysis deals with the fundamental knowledge in solving electronic circuits with ideal and non-ideal practice components. The involved skill and knowledge are the foundations of many advanced electronics courses.

Fundamental Electronics (36 hours)

This course introduces basic signal, spectrum, and amplifier concepts for the analog electronic circuits. The electronic devices including diodes, bipolar junction transistors (BJTs), field effect transistors (FETs) and Operational Amplifiers (Op-Amps) will be discussed. In each device; its analysis is firstly presented after a particular device physics overview, and then the design some circuit applications follow. The main focus of this course is not only to develop the student ability to analyze and design basic analog electronic circuits with passive components and/or the active elements like diode, transistors and Op-Amp. Besides, some experiments are provided to help students to have a thorough grasp of the basic electronic circuit problem. Throughout this course, small signal analysis and low frequency operation are mainly considered for the students to have the first interesting impression in this important discipline of the ECE program.

Probability and Statistics (36 hours)

This course introduces the students with the fundamental concepts and principles of probabilities and statistics. It prepares students to work professionally when dealing with engineering problems related to probability and statistics. The topics include probability, binomial, Poisson and normal distribution, sampling distribution, hypothesis testing, simple linear regression and correlation.

Engineering Mathematics (36 hours)

Functions of two or more variables and their derivatives, applications of partial derivatives. Multiple integrals. Introduction to vector fields and line integrals. Surface integrals.

Electric Machines (36 hours)

This course introduces fundamental concepts and principles of operation of transformers, DC machines, synchronous machines and induction machines to the students and equips the students with basic experimental and modelling skills for handling problems associated with these devices.

Tentative Course Schedule

Month	Day						
2019	S	M	T	W	T	F	S
十二月	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31				

Month	Day						
2020	S	M	T	W	T	F	S
January				1	2	3	4
	5	6	7	8	9	10	11
	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30	31	
February							1
	2	3	4	5	6	7	8
	9	10	11	12	13	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
March	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31				
April				1	2	3	4
	5	6	7	8	9	10	11
	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30		
May						1	2
	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
	31						
June		1	2	3	4	5	6
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30				