Module Code	**EEU33C03**
Module Name	Analogue Circuits
ECTS Weighting[1]	5 ECTS
Semester taught	Semester 2
Module Coordinator/s	Prof. Justin King

Module Learning Outcomes with reference to the Graduate Attributes and how they are developed in discipline	On successful completion of this module, students should be able to: LO 1) Analyse circuits containing multiple diodes [PO1(ii), PO2(ii, iii)] LO 2) Perform dc and small-signal analysis of MOSFET circuits [PO1(ii), PO2(ii,iii)] LO 3) Design and analyse MOSFET amplifiers [PO1(ii), PO3(i), PO4(ii)] LO 4) Apply electronic filter theory to circuit design [PO1(iv), PO2(ii), PO3(i)] LO 5) Design and implement active filters to meet a given specification [PO1(iv), PO3(i,ii), PO4(ii)] **Graduate Attributes: levels of attainment** To act responsibly - Not embedded To think independently - Enhanced To develop continuously - Enhanced To communicate effectively - Enhanced
Module Content	This module provides a thorough foundation in the analogue circuits used for processing general signals which are continuous functions of time. The module aims to provide students with knowledge of the operational principles and practical limitations of analogue circuits at device and circuit level, as well as instructing them in the analysis and design of these circuits. All the principles and techniques learned are applicable to the design of analogue systems on a wider scale. During the module, students will develop the analytical and synthesis skills needed to design analogue circuits for electronic equipment intended for any modern application area. Students will, via laboratory sessions, obtain hands-on experience in the design, construction and measurement of practical discrete analogue circuits.
Teaching and Learning Methods	Lectures Tutorials Problem Sets Online "Test Your Understanding" formative problems

[1] TEP Glossary

Assessment Details[2] Please include the following: • **Assessment Component** • **Assessment description** • **Learning Outcome(s) addressed** • **% of total** • **Assessment due date**	Assessment Component	Assessment Description	LO Addressed	% of total	Week due
	Laboratory	Practical	3	20	10, 11
	Midterm Exam	In-Class MCQ	1	10	6
	Final Exam	Written	1 – 5	70	Sem2 Examinations

Reassessment Requirements	Written Exam (100%)

Contact Hours and Indicative Student Workload[2]	**Contact hours:** 44
	Independent Study (preparation for course and review of materials): 20
	Independent Study (preparation for assessment, incl. completion of assessment): 55

Recommended Reading List	Microelectronic Circuits. A.S. Sedra and K.C. Smith, 7th Edition 2014. Active and Passive Analog Filter Design L. P. Huelsman (McGraw-Hill)
Module Pre-requisite	EEU22E06 or equivalent
Module Co-requisite	
Module Website	Blackboard
Are other Schools/Departments involved in the delivery of this module? If yes, please provide details.	No
Module Approval Date	
Approved by	
Academic Start Year	2024
Academic Year of Date	09 September 2024