



Course Descriptor ECEN332 Electronics II

ACADEMIC YEAR	2020/2021		
Course Code & Title	ECEN332 Electronics II		
Credit hours	3	Level of study	Undergraduate
College / Centre	College of Engineering		
Co-requisites		Pre-requisites	ECEN331 Electronics I

1. COURSE OUTLINE

Analysis and design of electronic circuits incorporating BJTs, FETs, and ICs including differential, multistage, wideband, and power amplifiers. Analysis and design of oscillators.

2. AIMS

This course prepares students for engineering practice through analysis and design experiences involving electronic amplifiers and oscillators. This course includes engineering topics and engineering design.]

3. LEARNING OUTCOMES, TEACHING, LEARNING and ASSESSMENT METHODS

Learning Outcomes (Definitive)	Teaching and Learning methods (Indicative)	Assessment (Indicative)
Upon successful completion of this course, students will be able to:		
1. Analyze and design differential amplifiers	Lecturer, Presentation	Written Examination
2. Analyze and design multistage amplifiers	Lecturer, Presentation	Written Examination
3. Obtain the frequency response of amplifiers	Lecturer, Presentation	Written Examination
4. Analyze and design wideband amplifiers	Lecturer, Presentation	Written Examination
5. Analyze and design amplifiers with feedback	Lecturer, Presentation	Written Examination
6. Analyze and design output stages in power amplifiers	Lecturer, Presentation	Written Examination
7. Analyze and design oscillators	Lecturer, Presentation	Written Examination

4. ASSESSMENT WEIGHTING

Assessment	Percentage of final mark (%)
Mid-term Examination	30
Assignments	30
Final Examination	40
TOTAL	100%

5. ACHIEVING A PASS

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Students will achieve **3** credit hours for this course by passing **ALL** of the course assessments [*alternatively, list the compulsory pass assessments**] and achieving a **minimum overall score of 50%**

NB *Ensure that ALL learning outcomes are taken into account

6. COURSE CONTENT (Indicative)	
LECTURE TOPIC	TIME (HOURS)
Differential amplifiers	6
Multistage amplifiers	6
Frequency response of BJT and FET amplifiers	9
Wideband amplifiers.	3
Amplifiers with Feedback	6
Output stages and power amplifiers (class A, B, and AB)	9
Oscillators	6
TOTAL HOURS	45
Plus RECOMMENDED INDEPENDENT STUDY HOURS	
TOTAL COURSE HOURS	90

7. RECOMMENDED READING
 Core text/s:



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Adel Sedra and Kenneth Smith, Microelectronic Circuits, 7th edition, Oxford University Press, 2014.

Library + online resources: James M. Fiore, Semiconductor Devices: Theory and Application, https://www.oercommons.org/courses/semiconductor-devices-theory-and-application?__hub_id=19