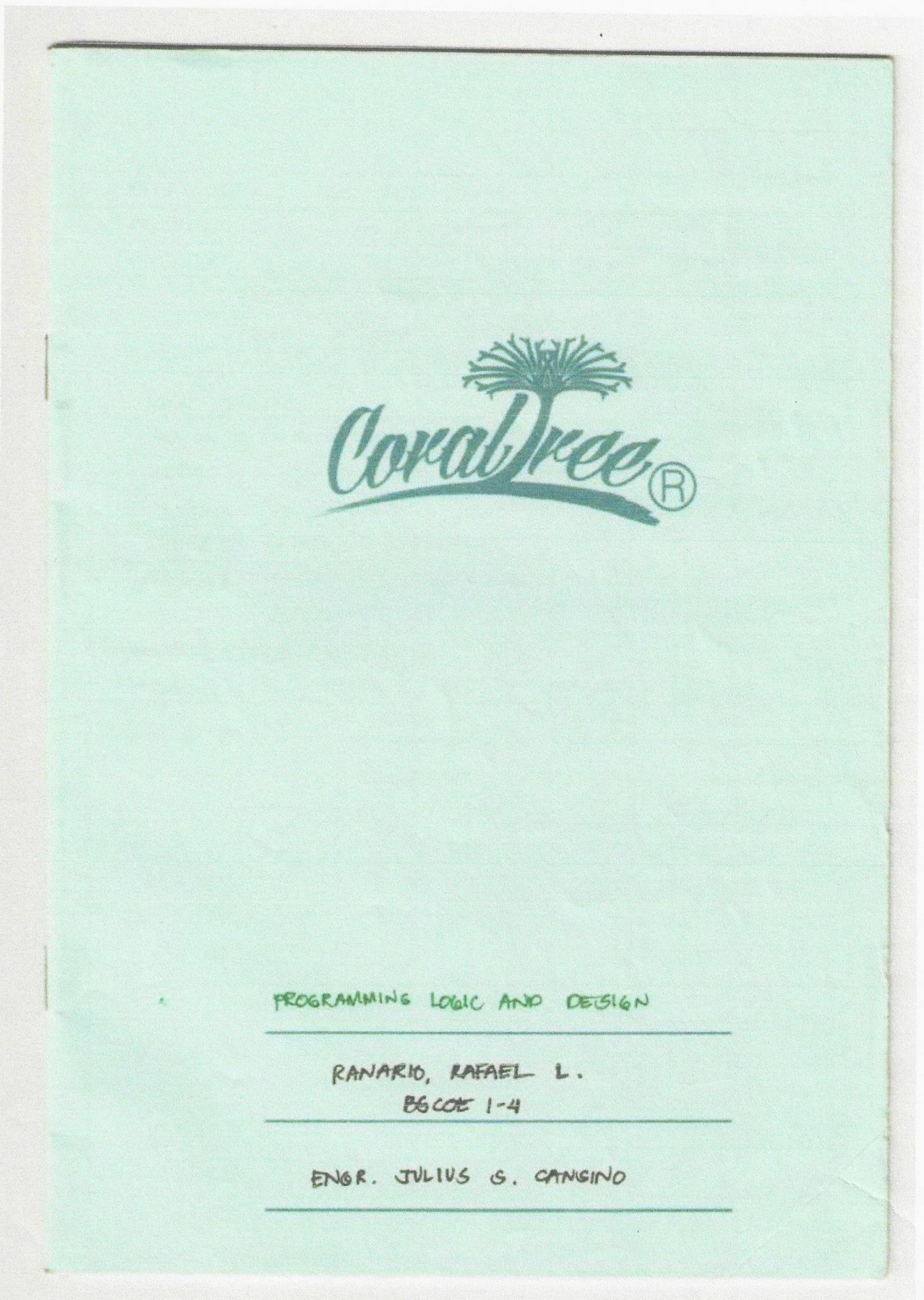
CoralTree®
PROGRAMMING LOGIC AND DESIGN
RANARIO, RAFAEL L.
BSCOE 1-4
ENGR. JULIUS G. CANGINO

DATE

PROGRAMMING LOGIC AND DESIGN

PROFESSOR: ENGR. JULIUS S. CANGINO

SCHEDULE: ROOM: CEA 312

TUESDAY: 10:30AM - 1:30PM

FRIDAY: 10:30AM - 1:30PM

COURSE OUTLINE:

MODULE 1: INTRODUCTION TO COMPUTER & PROGRAMMING

MODULE 2: INTRO TO PYTHON PROGRAMMING

MODULE 3: I/O STATEMENTS, ARITHMETIC EXPRESSIONS & VARIABLE

MODULE 4: SELECTION STATEMENTS

MODULE 5: REPETITION STATEMENTS

MODULE 6: FUNCTIONS

MODULE 7: LIST & ARRAYS

MODULE 8: FILE HANDLING / EXCEPTION HANDLING.

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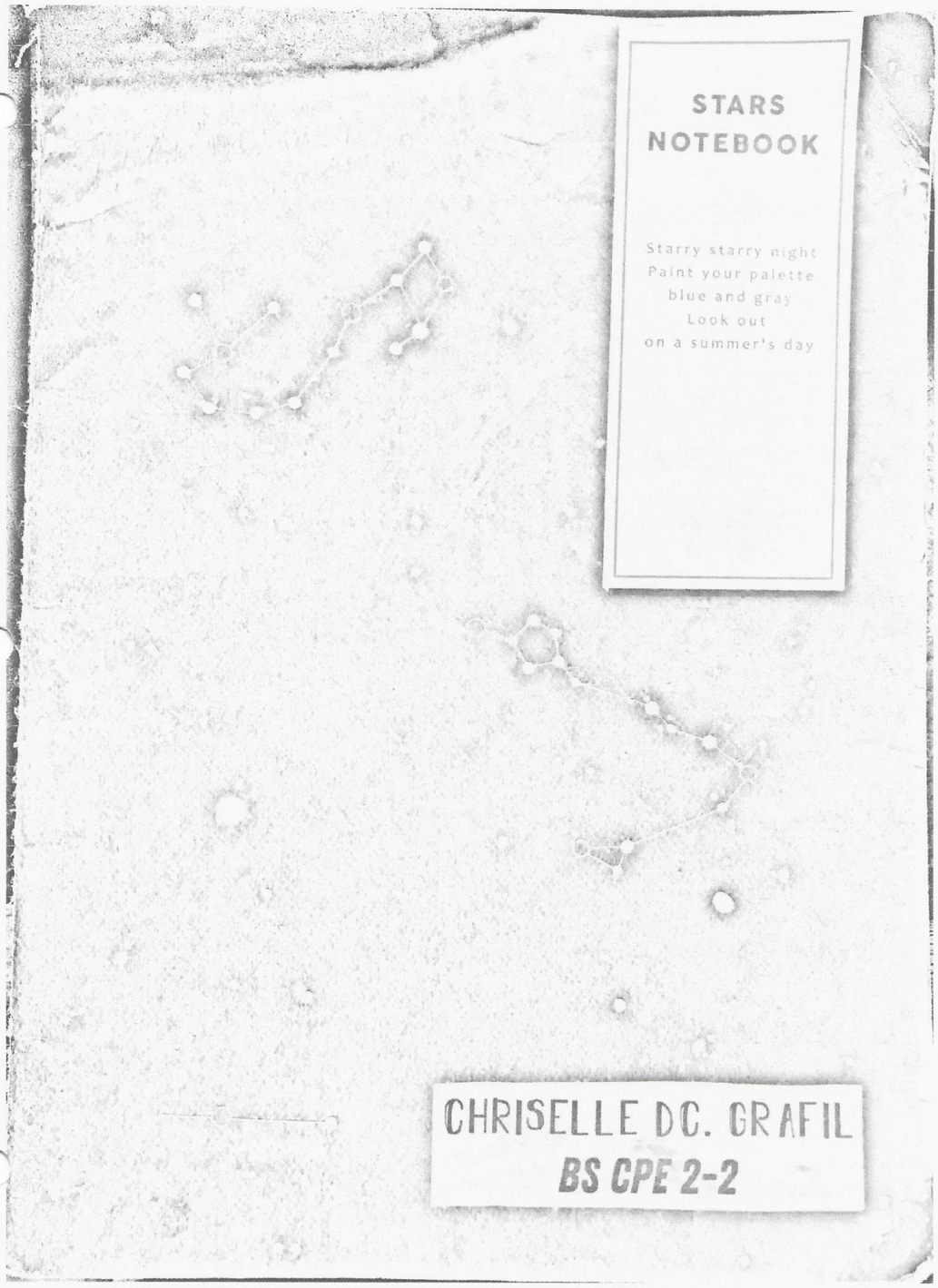
ANONAS COR. PUREZA STREETS, STA. MESA, MANILA



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FUNDAMENTALS OF ELECTRICAL CIRCUITS

Professor Ferdinand Natividad

COURSE CODE: COE 321 COURSE TITLE: CIRCUITS I CREDIT: 4 UNITS

COURSE DESCRIPTION:

This course deals with the study of the basic fundamental units of electrical/electronic acquire knowledge about the fundamentals of electricity, basic electrical circuits, network theorems, analyzing circuits and apply different laws or principles of electricity.

SUBJECT OUTLINE:

I. BASIC RESISTANCE
- A. Factors that affect the resistance of conductor
- B. Inferred zero resistance
- C. Temperature coefficient at any time
- D. Resistivity or specific resistance
- E. Volume resistivity
- F. Area in circular mil (Cmil)

II. ELECTRICAL CIRCUITS
- A. Circuit
- B. Switch
- C. Power Source
- D. Dependent and Independent Sources
- E. Current Flow
- F. Basic Electrical Circuits
  1) Series
  2) Parallel
  3) Complex

III. OHM'S LAW
- A. Equation (V=IR)
- B. Application of Ohm's Law
- C. Ammeter and Voltmeter method for finding resistance
- D. Power
- E. Energy
- F. Efficiency

IV. KIRCHHOFF'S LAW
- A. Current and Voltage Divider
- B. Kirchhoff's Voltage Law (KVL)
- C. Kirchhoff's Current Law (KCL)

V. NETWORK THEOREMS
- A. Mesh Analysis
- B. Nodal Analysis
- C. Superposition Theorem
- D. Thevenin's and Norton's Theorem
- E. Delta and Wye Networks
- F. Bridge Circuits
- G. Time Constant

REFERENCES:

Circuits' books by:
1) B. Grob
2) Boyle Stad
3) Dawes (Volume 1)
4) Schawn's Outline
5) Johnson and Johnson
6) E. Fowler

GRADING SYSTEM:

FGCC = 50% Lecture + 40% Lab + 10% CS

*50% Lecture = Ave $\bar{G}_Z = \frac{G_1 + G_n}{G_n}$ (unannounced) + Boardwork

*40% Laboratory = 50% Individual Performance + Actual Exam + 40% Lab Group Performance + 10% Lab Manual

*10% CS = Attendance + Assignment + Graded Recitation + Attitude

CIRCUITS II

SUBJECT DESCRIPTION:

Fundamental relationship in circuit theory, complex algebra and phasors; simple AC circuits, impedance, admittance, mesh, and node analysis for AC circuits, AC network theorems, power in the AC circuits resonance.

SUBJECT OUTLINE:

I. INTRODUCTION TO AC CIRCUITS
- A. Basic Terminology
- B. Circuit Parameters
- C. Waveforms

II. SINE WAVE
- A. Study of sine wave in relation to AC systems
  1) Peak values and peak-to-peak values
  2) Instantaneous values
  3) Effective value
- B. Phase Relations
- C. Response of Basic R, L, and C elements to a sinusoidal voltage or current

III. TRANSIENT RESPONSE (R,L,C)
- A. In series
- B. In Parallel

IV. REACTANCES
- A. Inductive Reactance
- B. Capacitive Reactance

V. VECTOR ALGEBRA AND PHASORS (OPTIONAL)
- A. Complex Numbers
  1) Polar Form
  2) Rectangular Form
- B. Phasor Representation of a Sine Wave
  1) current and voltage in resistance
  2) current and voltage in an inductive resistance
  3) current and voltage in a capacitive resistance

VI. IMPEDANCE
- A. Series
- B. Parallel
- C. Series-Parallel Combination
- D. Conductance - Susceptance - Admittance

VII. POWER AND POWER FACTOR
- A. True power
- B. Reactive Power
- C. Apparent Power
- D. Power Triangle
- E. Power Factor and Power Factor correction

VIII. RESONANCE
- A. series
- B. Parallel
- C. Quality Factor
- D. Resonance Filter Networks

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Date. _____

FLICS

Ronald P. Catibag Jr.
BSCpE 2-D

Date.

subject code : COE 411

subject title : circuits 2 (AC circuit)

subject description :

- Fundamental relationship in ckt, theory, algebra and phasors; simple AC ckts, impedance, admittance, mesh and node analysis, for AC ckts., AC network theorems, power in AC ckts, resonance

Subject outline

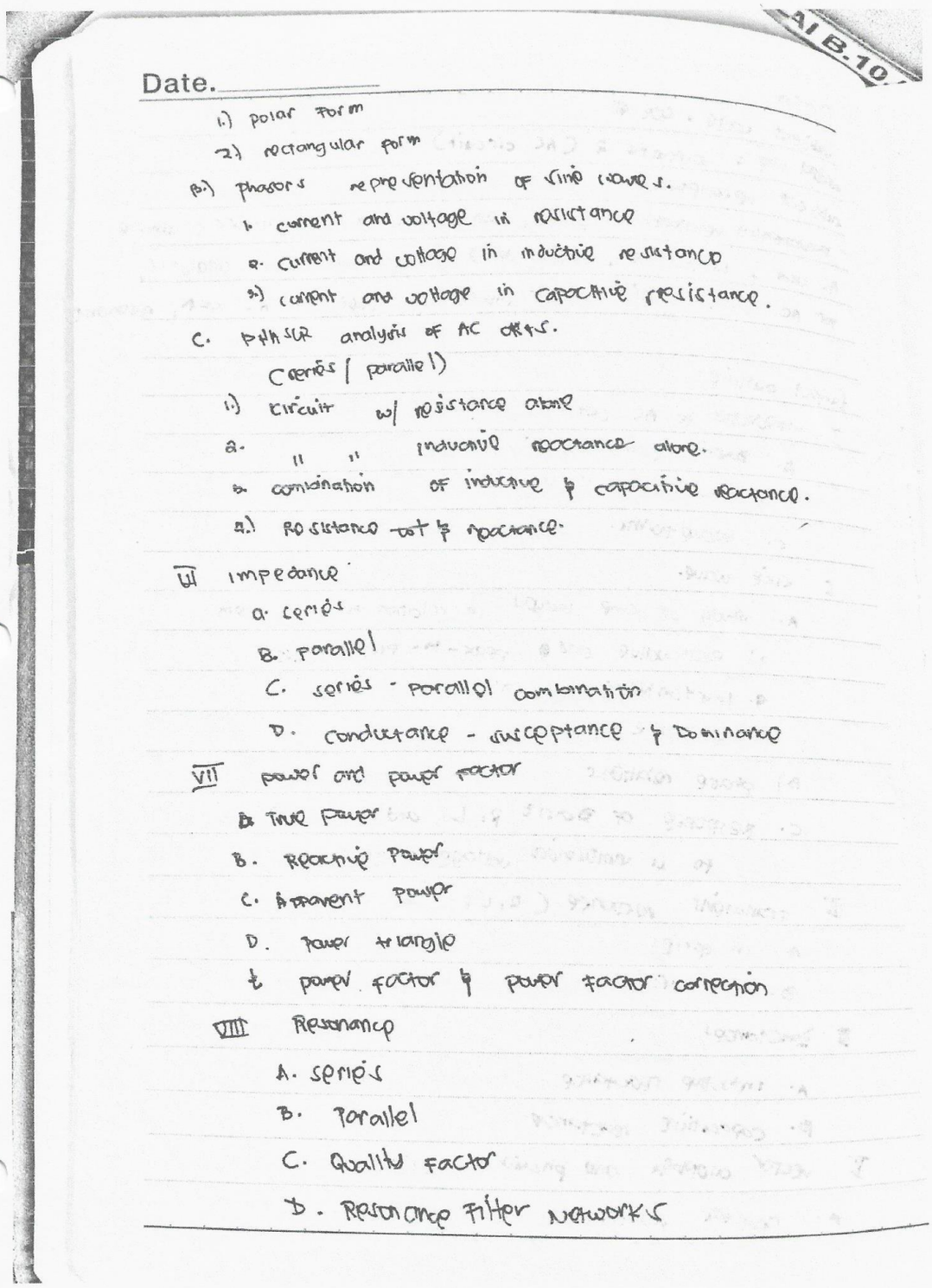
I. Introduction to AC ckt
   A. Basic terminology
   B. circuit parameter
   C. waveforms.

II sine wave.
   A. study of sine waves in relation to AC system
      1.) peak value and peak-to-peak values
      2. Instantaneous value
      3.) effective value
   B.) phase relations
   C. Response of basic R, L, and C elements to a sinusoidal voltage or current.

III transient response (R, L, C)
   A. in series
   B. in parallel

IV Reactances
   A. inductive reactance
   B. capacitive reactance

V vector algebra and phasors (optional)
   A. complex numbers



AI B-10

Date.

1.) polar form
2.) rectangular form

B.) phasors representation of sine waves.
1. current and voltage in resistance
2. current and voltage in inductive resistance
3.) current and voltage in capacitive resistance.

C. PHASOR analysis of AC circuits.
(series / parallel)
1.) circuit w/ resistance alone
2. " " inductive reactance alone.
3. combination of inductive & capacitive reactance.
4.) Resistance - ot & reactance.

III Impedance
a. series
B. parallel
C. series - parallel combination
D. conductance - susceptance & Dominance

VII power and power factor
A. True power
B. Reactive power
C. Apparent power
D. power triangle
& power factor & power factor correction

VIII Resonance
A. series
B. Parallel
C. Quality factor
D. Resonance Filter networks

Fundamentals of Electronic Circuit

Darri mae A. Masangcay
BSCpE 2-2

PAGE
DATE

Circuit 1

Course Code: COE 321

Course Title: Circuit 1

Credits: 4 units

Course Description:

This course deals with the study of the basic fundamentals unit of electrical/electronic square knowledge about the fundamentals of electricity, basic electrical circuits, network theorem, analyzing circuit and apply different laws or principles of electricity.

Subject Outline:

I: Basic resistance
- A. Factors affect the resistance of capacitor
- B. Inferred Zero Resistance
- C. Temperature coefficient at any time
- D. Resistivity or specific resistance
- E. Volume resistivity
- F. Area in circular mil (Cmil)

II: Electrical Circuit
- A. Circuit
- B. Switch
- C. Power source
  - dependent & independent source
  - 1. series
  - 2. Parallel
  - 3. complex
- D. DC circuit
- E. Current flow
- F. Basic Electrical Circuit

III: Ohm's Law
- A. V = IR
- B. Application of Ohm's Law
- C. Ammeter & Voltmeter method for finding R
- D. Power
- E. Energy
- F. Efficiency

IV: Kirchoff's Law
- A. Current & Voltage Divider
- B. KVL
- c. KCL

V: Network theorems
- A. Mesh Analysis
- B. Nodal Analysis
- C. Superposition
- D. Thevenin's & Norton's
- E. Delta & Wye Networks
- F. Bridge Circuit
- G. Time constant

References Circuit Books by:
1. B. Gnob
2. Boylestad
3. Dawes
4. Schawn's Outline
5. Johnson & Johnson
6. E. Fowler

Grading System

FGCC = 50% lec + 40% lab + 10% CS

50% lec = Ave $Q_E = \frac{Q_1 + Q_n}{Q_n} + BW$

40% lab = 50% indiv. + actual exam + 40% Lab group performance + 10% Lab manual

10% CS = Attendance + assignment + graded recitation + attitude

Sterling

PAGE

DATE

Circuit II

Subject Outline:

I: Introduction to AC Circuit
- A. Basic terminology
- B. Circuit Parameters
- C. Waveforms

II: Sine Waves
- A. Study of sine wave in relation to AC
  1. Peak values & peak-to-peak values
  2. Instantaneous values
  3. Effective values
- B. Phase relation
- C. Response of Basic R, L, and C elements to a sinusoidal voltage or current.

III: Transient Response (R, L, C)
- A. In series
- B. In Parallel

IV: Reactances
- A. Inductive reactances
- B. Capacitive reactances

V: Vector Algebra and Phasors
- A. Complex Number
  1. Polar Form
  2. Rectangular form
- B. Phasors representation of sinewave
  1. Current & Voltage in resistance
  2. Current & Voltage in an inductive resistance
  3. Current & Voltage in a capacitive resistance

VI: Impedance
- A. Series
- B. Parallel
- C. Series-Parallel Combination
- D. Conductance - susceptance & admittance

VII: Power and Power Factors
- A. True power
- B. Reactive power
- C. Apparent power
- D. Power Triangle
- E. Power factor and Power factor connection

VIII: Reasonance
- A. series
- B. Parallel
- C. Quality factor
- D. Reasonance Filter Network

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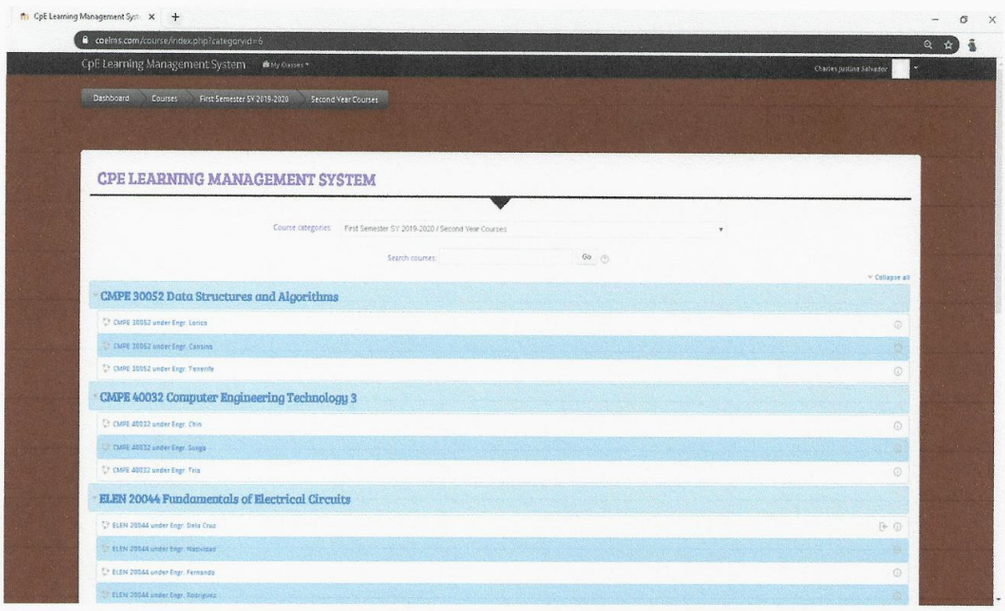

Screen capture of COELMS account used by the Computer Engineering Faculty and Students