



OUTCOME/S

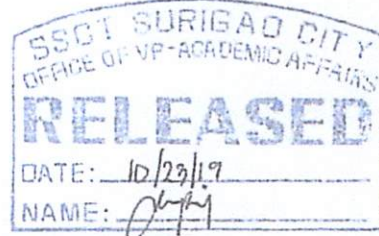
- O.1. Course syllabi are updated and approved by concerned authorities.



OFFICE OF THE VICE PRESIDENT FOR ACADEMIC AFFAIRS

MEMORANDUM

REFERENCE NO. : SSCT, OVPA -10-14, Series 19
 DATE : OCTOBER 23, 2019
 TO : ALL FACULTY
 FROM : THE VICE-PRESIDENT FOR ACADEMIC AFFAIRS
 SUBJECT : WORKSHOP ON OBE SYLLABI ENHANCEMENT



You are hereby requested to attend in the aforementioned workshop organize by this office at SSCT Academic Hall. The workshop will be on the following schedule.

- College of Teacher Education (CTE) -October 28-29, 2019
- College of Arts and Sciences (CAS) - October 30-31, 2019
- College of Engineering and Information Technology (CEIT)-November 4-5, 2019
- College of Technology (COT) - November 6-7, 2019

The participants are requested to bring laptop, books and references, and hard/soft copies of their syllabi.

Please be guided accordingly.

[Signature]
EMMYLOU A. BORJA, EdD
 Vice-President, Academic Affairs

Received :

CEIT - Gm 10-23-19 2:51
COT - Jv 10-23-19 2:55 PM
CTE - Jy 10/23/19 3PM
CAS - Jd 10/23/19 2:20PM



COLLEGE OF ENGINEERING & INFORMATION TECHNOLOGY

OFFICE MEMO

REFERENCE NO. : SSCT – CEIT – 08 – 003, S. 19

DATE : AUGUST 19, 2019

TO :

Engr Josephine V. Acido	Arvin E. Mag-Usara
Dr Rosanne E. Andaluz	Engr Darwin C. Mangca (PC)
Engr Richard A. Badiola	Dr Amor C. Montejo
Engr Joselito S. Baldapan (PC)	Dr Analyn S. Morite (PC)
Renz M. Buctuan	Engr Crispin P. Noguerra
Dr Unife O. Cagas	Engr Gracechell M. Pascua
Engr Aldrich B Calinawan	Arch Lufre Potente
Engr Levi A. Corvera	Engr Virne P. Portugues
Dr Monalee A. Dela Cerna (PC)	Alma Christie C. Reyna (PC)
Engr Conrado Jr. B. Delosa	Engr Ritchie A. Reyna
Trashy P. Dumaicos	Engr Perfecto Jr. R. Ruaya
Dr Jessica Rose E. Fernandez (PC)	Arch Marlon C. Solloso
Dr Virille C. Francisco	Teresita L. Toledo
Jovie M. Gallera	Dr Vrian Jay V. Ylaya
Dr Aurea M. Madelo	
Ralph Aran C. Cabañero	Jessa G. Hambre
Engr Ingrid Escabal	Engr Vernon V. Liza
Engr Jemielou M. Fideles	Engr Andy Bong F. Navarro
Engr Galgen B. Gailla	Engr Erlito M. Orit
Engr Ghandi B. Galila	Engr Elmario Pejan
Engr Archie C. Gegona	Häsmër Salubre

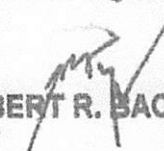
FROM : ENGR ROBERT R. BACARRO, MECE, MBA
Dean, CEIT

SUBJECT : SUBMISSION OF COURSE SYLLABUS AS OF 1ST SEMESTER,
A.Y. 2019 – 2020 ON OR BEFORE AUGUST 27, 2019

Greetings!

In line with our ISO process, you are hereby directed to submit your Course Syllabi to your respective Program Chairs on or before August 27, 2019 following the correct and approved ISO format. These course syllabi are signed already by all the signatories from the instructor up to the VP for Academic Affairs.

ENGR ROBERT R. BACARRO, MECE, MBA
Dean, CEIT



The Office of the Vice-President for Academic Affairs initiated to conduct a Workshop on OBE Syllabi Enhancement last October 28 – November 7, 2019. Dr. Merlyn Estoque was being invited as Resource Speaker on the said workshop to share her expertise in OBE Syllabi. The event was conducted at SSCT Academic Hall and was actively participated by all Faculty across Colleges. This event helps the faculty to enhance their OBE course syllabi using the appropriate action verbs as ILO's and other parts using the standard format. The seminar ended with a presentation and critiquing of outputs by the participating faculty per program.





ATTENDANCE SHEET

Title of the Activity: SYLLABUS ENHANCEMENT

Date and Time: October 28, 2019
Venue: EB210

No.	NAME	GENDER	DESIGNATION	SIGNATURE	
				AM	PM
1	ADLAON, MAURICIO S				
2	ALIPAO, ARCHIE B	M	Faculty	<i>[Signature]</i>	<i>[Signature]</i>
3	ALIPAO, LOVELITO G	M	CTE Faculty	<i>[Signature]</i>	<i>[Signature]</i>
4	BAYANG, ELIZA	F	CTE	<i>[Signature]</i>	<i>[Signature]</i>
5	BORJA, EMMYLOU A				
6	BORJA, LUCILYN	F	Faculty	<i>[Signature]</i>	<i>[Signature]</i>
7	BUENAFLO, ROBERTO				
8	CABA, AILYN B	F	CTE-Faculty	<i>[Signature]</i>	<i>[Signature]</i>
9	CAUSING, PILMORE M	F	CTE-faculty	<i>[Signature]</i>	<i>[Signature]</i>
10	CAVITE, IRYN E				
11	DELITO, ELEANORE MITSU S	F	Faculty	<i>[Signature]</i>	<i>[Signature]</i>
12	DIAZ, ANNABELLE N				
13	ESPAÑOLA, RAYMOND P				
14	ESTOQUE, MERLYN L	F	Faculty	<i>[Signature]</i>	<i>[Signature]</i>
15	FABROA, HAYDE D				
16	GUERRA, MARIA FE C	F	Faculty	<i>[Signature]</i>	<i>[Signature]</i>
17	LLASOS, GABRIEL, JR P	M	Faculty	<i>[Signature]</i>	<i>[Signature]</i>
18	LUMINTAC, MARIA TAVITA Q				
19	MAGHUYOP, ALICIA Z				
20	MALICAY, LEONIELYN G	F	Dean, CTE	<i>[Signature]</i>	<i>[Signature]</i>
21	MATURAN, JOCELYN T				
22	MENOR, ELIZABETH S				
23	MIRANDA, JONAS ROBERT L	M	Faculty	<i>[Signature]</i>	<i>[Signature]</i>
24	NEMENZO, ALNIE E				
25	PATAC, ADRIANO, JR V				
26	PEREZ, ALICIA L	F	CTE- Faculty	<i>[Signature]</i>	<i>[Signature]</i>
27	RETITA, PRINCESS GRACE A	F	Faculty	<i>[Signature]</i>	<i>[Signature]</i>
28	SALVADOR, NELIA S	F	CTE - Faculty	<i>[Signature]</i>	<i>[Signature]</i>
29	SEBAG, EDEN GLIFF P				
30	SERDAN, GERALDINE A	F	CTE - Faculty	<i>[Signature]</i>	<i>[Signature]</i>
31	SINACA, MATT B	M	Faculty-Head	<i>[Signature]</i>	<i>[Signature]</i>
32	SULIMA, JOEWAREN R	F	Faculty	<i>[Signature]</i>	<i>[Signature]</i>
33	TALINGTING, RONITA E				
34	TANGUIHAN, LUCILLE G	F	Faculty	<i>[Signature]</i>	<i>[Signature]</i>
35	ULBIS, MARIA FE H	F	Faculty	<i>[Signature]</i>	<i>[Signature]</i>
36	URBIZONDO, ARCHIE P	M	Faculty	<i>[Signature]</i>	<i>[Signature]</i>
37	VASQUEZ, MA. CRISANTA S	F	Faculty	<i>[Signature]</i>	<i>[Signature]</i>
38	VILLACENCIO, CLARRISSA B	F	CTE faculty	<i>[Signature]</i>	<i>[Signature]</i>
39	VILLAMOR, TITA P				
40	ECLE, KIER L	M	CTE Faculty	<i>[Signature]</i>	<i>[Signature]</i>
41	RUAYA, ROMAR CHRISTIAN L	M	CTE GL	<i>[Signature]</i>	<i>[Signature]</i>

Prepared by:
[Signature]
LEONIELYN G. MALICAY, PhD
DEAN, College of Teacher Education



**SURIGAÓ STATE COLLEGE
OF TECHNOLOGY**

"For Nation's Greater Heights"

FM-SSCT-ACAD-003
00
20 September 2018
1 of 1

ATTENDANCE SHEET

Title of the Activity: SYLLABUS ENHANCEMENT

Date and Time: October 29, 2019
Venue: EB210

No.	NAME	GENDER	DESIGNATION	SIGNATURE	
				AM	PM
1	ADLAON, MAURICIO S				
2	ALIPAO, ARCHIE B	M	CTE Faculty		
3	ALIPAO, LOVELITO G	M	CTE Faculty		
4	BAYANG, ELIZA	F	CTE FACULTY		
5	BORJA, EMMYLOU A				
6	BORJA, LUCILYN				
7	BUENAFLO, ROBERTO				
8	CABA, AILYN B	F	CPE FACULTY		
9	CAUSING, PILMORE M	F	CPE Faculty		
10	CAVITE, IRYN E				
11	DELITO, ELEANORE MITSU S	F	Faculty		
12	DIAZ, ANNABELLE N				
13	ESPAÑOLA, RAYMOND P				
14	ESTOQUE, MERLYN L				
15	FABROA, HAYDE D	F	CTE PC- DEED		
16	GUERRA, MARIA FE C	F	CTE - Faculty		
17	LLASOS, GABRIEL, JR P	M	Faculty		
18	LUMINTAC, MARIA TAVITA Q	F	Faculty		
19	MAGHUYOP, ALICIA Z	F	Faculty		
20	MALICAY, LEONIELYN G	F	Dean, CTE		
21	MATURAN, JOCELYN T				
22	MENOR, ELIZABETH S	F	Faculty		
23	MIRANDA, JONAS ROBERT L	M	Faculty		
24	NEMENZO, ALNIE E				
25	PATAC, ADRIANO, JR V	M	Faculty/ITSD		
26	PEREZ, ALICIA L				
27	RETITA, PRINCESS GRACE A				
28	SALVADOR, NELIA S	F	Faculty		
29	SEBAG, EDEN GLIFF P				
30	SERDAN, GERALDINE A				
31	SINACA, MATT B	M	Faculty, CPE		
32	SULIMA, JOEWAREN R	F	Faculty		
33	TALINGTING, RONITA E				
34	TANGUIHAN, LUCILLE G	F	CTE Faculty		
35	ULBIS, MARIA FE H				
36	URBIZTONDO, ARCHIE P	M	"		
37	VASQUEZ, MA. CRISANTA S	F	Faculty		
38	VILLACENCIO, CLARRISSA B	F	CTE faculty		
39	VILLAMOR, TITA P				
40	ECLÉ, KIER L	M	CTE Faculty		
41	CIRUELA, DENZEL MARK	M	CTE GL		
42	RUAYA, ROMAR CHRISTIAN L				

Prepared by:

Leonilyn G. Malicay
LEONIELYN G. MALICAY, PhD
DEAN, College of Teacher Education



**ATTENDANCE SHEET
COLLEGE OF ARTS AND SCIENCES**

Title of the Activity: WORKSHOP ON ENHANCEMENT OF
OBE SYLLABI (October 30-31, 2019)

Date and Time: October 30, 2019 / 8:00am-5:00pm
Venue: SSCT Academic Hall

NO.	NAME	GENDER	DESIGNATION	SIGNATURE
1	Irish A. Ojeda	F	Asst. Prof. I	[Signature]
2	Maribel M. Caracatan	F	Asst. Prof.	[Signature]
3	Evangelina P. Sabeyon	F	Col	[Signature]
4	CANDICE MARIE C. CROENKA	F	col	[Signature]
5	KRISTOPHER M. NGILANGIL	M	GL	[Signature]
6	Analyka M. Muni	F	GL	[Signature]
7	Chelisa S. Buenafelov	F	col-PC, BSBS	[Signature]
8	Psyche Karren Ann S. Osing	F	GL	[Signature]
9	MEDIELYN M. OTOJAN	F	GL	[Signature]
10	JERRY T. CUADRADO	M	Faculty	[Signature]
11	MARINY P. BUDOK	M	Faculty	[Signature]
12	Navarro, Carl Kenneth P.	M	Faculty	[Signature]
13	Parlita S. Magayo	F	Asst Prof	[Signature]
14	Bustamanant Pradere, Peao V.	M	Instructor I	[Signature]
15	Germao, Elicela L.	F	GL	[Signature]
16	Osonio, Ricky T.	M	Instructor I	[Signature]
17	Paymalan, Christian G.	M	GL	[Signature]
18	LOPEZ, Christian Joy	M	GL	[Signature]
19	BARTUFO, ROSA E	F	Faculty	[Signature]
20	LISTON, GLEANNA C.	F	GL	[Signature]
21	Calang, Leah Mae L.	F	GL	[Signature]
22	Vendita S. Gomez	F	Faculty	[Signature]
23	Florencia T. Supina	F	Faculty	[Signature]
24	Merita Rebecca Y. Casten	F	Guest Lecturer	[Signature]
25	LOWEA R. ANTILOPO	F	Guest Lecturer	[Signature]
26	Michelle T. Pangarduyan	F	Faculty	[Signature]
27	Elma C. Echen	F	Faculty	[Signature]
28	CIRNELA, DENZEL MARK	M	FACULTY	[Signature]
29	FIDELSON, NIEL	M	FACULTY	[Signature]
30	Bonilla, HUDNARK	M	GUEST LEC.	[Signature]
31	BERCABAL, ANGELE MAE C.	F	GUEST LEC.	[Signature]
32	Paymalan, Irmalyn B.	F	Faculty	[Signature]
33	FINA, MARGARET F.	F	GUEST LEC.	[Signature]
34	ALONIE MONTANO	M	Faculty	[Signature]
35	OSAMON, LOUELA S.	F	Faculty	[Signature]

Prepared and Checked by:



**ATTENDANCE SHEET
COLLEGE OF ARTS AND SCIENCES**

Title of the Activity: WORKSHOP ON ENHANCEMENT OF
OBE SYLLABI (October 30-31, 2019)

Date and Time: October 30, 2019 / 8:00am-5:00pm
Venue: SSCT Academic Hall

NO.	NAME	GENDER	DESIGNATION	SIGNATURE
36	VALARDE, VANESSA E.	F		
37	Christine P. Valarde	F		
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70				

ATTENDANCE SHEET
COLLEGE OF ARTS AND SCIENCES

Title of the Activity: WORKSHOP ON ENHANCEMENT OF
OBE SYLLABI (October 30-31, 2019)

Date and Time: October 31, 2019 / 8:00am-5:00pm
Venue: SSCT Academic Hall

NO.	NAME	GENDER	DESIGNATION	SIGNATURE
1	DEAMON, LORENA S.	F	Faculty	[Signature]
2	NGILANGIL, Kristopher M.	M	Faculty	[Signature]
3	Mewl, Analyka M.	F	Col	[Signature]
4	arnie e. nemenzo	F	FACULTY	[Signature]
5	Calang, Leah Mae L.	F	GL	[Signature]
6	Bustamante, Prudence Peace V.	M	Instructor faculty	[Signature]
7	CREENCIA, carolice pavia c.	F	col	[Signature]
8	OTOJAN, MEDIELYN M.	F	GL	[Signature]
9	Gheleen S. Beneraflo	F	DIC-PL, BSES	[Signature]
10	Porhita S. Magroo S	F	Asst Prof II	[Signature]
11	ELMA C. ECHIN	F	Faculty	[Signature]
12	Irish A. Otero	F	Asst. Prof I	[Signature]
13	Marivel M. Catacutan	F	Faculty	[Signature]
14	Evangelina P. Salazar	F	Col	[Signature]
15	Patulon, Elm's PO	M	DEAN, CAS	[Signature]
16	CASTEN, NEVITA R-Y	F	HL	[Signature]
17	CIRUELA, DENZEL MARK A.	M	GL	[Signature]
18	Sulime Floriana T.	F	Faculty	[Signature]
19	Wendelito, Jerry T.	M	Faculty	[Signature]
20	NIEL PICURON	M	Faculty	[Signature]
21	LOPEZ, Omshan Jay	M	Faculty	[Signature]
22	Doralyn Paymalan	F	Faculty	[Signature]
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				

Prepared and Checked by:

[Signature]



"For Nation's Greater Heights"



Workshop on Revision of Course Syllabi – Session 2

Presented by:

ENGR ROBERT R. BACARRO

Workshop 2

INSTRUCTION: Using MS-Word, fill in the matrix below. Then save it under the filename: **Workshop2-College-LastName**.

ILO-CC-TLE-T-V MATRIX

Intended Learning Outcome (ILO)	Course Content (CC)	Teaching and Learning Activity (TLE)	Resources (R)	Values



"For Nation's Greater Heights"

Sample 2: Scope and Sequence Grid

Intended Learning Outcome (ILO)	Course Content (CC)	Teaching Learning & Activity (TLA)	Resources (R)	Values (V)
<i>ECE361-ILO1.</i> Identify the signal characteristics used in signal processing	1. Signal Characteristics and its classifications	Class discussion on the characteristics and classifications of signals <i>Synchronous</i>	Visual aids on signal characteristics and classifications	Core Value: <i>Socially responsive</i> Sub-Value: <i>Sympathetic classifications of signals</i>
<i>ECE361-ILO2.</i> Interpret signal samples taken from analog signal	2. Sampling theorem and Aliasing	Viewing a video about sampling and aliasing with guide questions <i>Asynchronous</i>	Video clip in signal sampling	Core Value: <i>Service oriented</i> Sub-Value: <i>Diligent sampling of signals</i>
<i>ECE361-ILO3.</i> Analyze the convolution process in a given system	3. Convolution of Signals <i>MIDTERM EXAM</i>	Demonstration in convolution of two signals <i>Synchronous</i>	Visual aids in signal convolution	Core Value: <i>Committed</i> Sub-Value: <i>Determined to convolve signals</i>
<i>ECE361-ILO4.</i> Solve Fourier transform of a given analog signal	4. Fourier transform	Concept mapping the formulas used in Fourier transform <i>Synchronous</i>	Audio-Visual aids on Fourier Transform	Core Value: <i>Transformational</i> Sub-Value: <i>Adaptive application of Fourier Transform</i>
<i>ECE361-ILO5.</i> Solve Z transform of a given digital signal	5. Z transform	Class discussion about z-transform <i>Synchronous</i>	Audio-Visual aids on Z Transform	Core Value: <i>Transformational</i> Sub-Value: <i>Optimistic application of Z Transform</i>
<i>ECE361-ILO6.</i> Design FIR and IIR filters used in signal processing	6. Filtering and the design of FIR and IIR filters <i>FINAL EXAM</i>	Viewing a video about filtering and FIR and IIR filters <i>Asynchronous</i>	Video clip on FIR and IIR Filters	Core Value: <i>Service oriented</i> Sub-Value: <i>Authentic design of filters</i>



Sample 2: Scope and Sequence Grid

Intended Learning Outcome (ILO)	Course Content (CC)	Teaching Learning & Activity (TLA)	Resources (R)	Values (V)
ECE361-ILO1. Identify the signal characteristics used in signal processing	1. Signal Characteristics and its classifications	Class discussion on the characteristics and classifications of signals <i>Synchronous</i>	Visual aids on signal characteristics and classifications	
ECE361-ILO2. Interpret signal samples taken from analog signal	2. Sampling theorem and Aliasing	Viewing a video about sampling and aliasing with guide questions <i>Asynchronous</i>	Video clip in signal sampling	
ECE361-ILO3. Analyze the convolution process in a given system	3. Convolution of Signals <i>MIDTERM EXAM</i>	Demonstration in convolution of two signals <i>Synchronous</i>	Visual aids in signal convolution	
ECE361-ILO4. Solve Fourier transform of a given analog signal	4. Fourier transform	Concept mapping the formulas used in Fourier transform <i>Synchronous</i>	Audio-Visual aids on Fourier Transform	
ECE361-ILO5. Solve Z transform of a given digital signal	5. Z transform	Class discussion about z-transform <i>Synchronous</i>	Audio-Visual aids on Z Transform	
ECE361-ILO6. Design FIR and IIR filters used in signal processing	6. Filtering and the design of FIR and IIR filters <i>FINAL EXAM</i>	Viewing a video about filtering and FIR and IIR filters <i>Asynchronous</i>	Video clip on FIR and IIR Filters	



Sample 2: Scope and Sequence Grid

Intended Learning Outcome (ILO)	Course Content (CC)	Teaching Learning & Activity (TLA)	Resources (R)	Values (V)
<i>ECE361-ILO1.</i> Identify the signal characteristics used in signal processing	1. Signal Characteristics and its classifications	Class discussion on the characteristics and classifications of signals <i>Synchronous</i>		
<i>ECE361-ILO2.</i> Interpret signal samples taken from analog signal	2. Sampling theorem and Aliasing	Viewing a video about sampling and aliasing with guide questions <i>Asynchronous</i>		
<i>ECE361-ILO3.</i> Analyze the convolution process in a given system	3. Convolution of Signals <i>MIDTERM EXAM</i>	Demonstration in convolution of two signals <i>Synchronous</i>		
<i>ECE361-ILO4.</i> Solve Fourier transform of a given analog signal	4. Fourier transform	Concept mapping the formulas used in Fourier transform <i>Synchronous</i>		
<i>ECE361-ILO5.</i> Solve Z transform of a given digital signal	5. Z transform	Class discussion about z-transform <i>Synchronous</i>		
<i>ECE361-ILO6.</i> Design FIR and IIR filters used in signal processing	6. Filtering and the design of FIR and IIR filters <i>FINAL EXAM</i>	Viewing a video about filtering and FIR and IIR filters <i>Asynchronous</i>		



Sample 2: Scope and Sequence Grid

Intended Learning Outcome (ILO)	Course Content (CC)	Teaching Learning & Activity (TLA)	Resources (R)	Values (V)
<i>ECE361-ILO1.</i> Identify the signal characteristics used in signal processing	1. Signal Characteristics and its classifications			
<i>ECE361-ILO2.</i> Interpret signal samples taken from analog signal	2. Sampling theorem and Aliasing			
<i>ECE361-ILO3.</i> Analyze the convolution process in a given system	3. Convolution of Signals <i>MIDTERM EXAM</i>			
<i>ECE361-ILO4.</i> Solve Fourier transform of a given analog signal	4. Fourier transform			
<i>ECE361-ILO5.</i> Solve Z transform of a given digital signal	5. Z transform			
<i>ECE361-ILO6.</i> Design FIR and IIR filters used in signal processing	6. Filtering and the design of FIR and IIR filters <i>FINAL EXAM</i>			



Sample 1: Scope and Sequence Grid

Intended Learning Outcome (ILO)	Course Content (CC)	Teaching Learning & Activity (TLA)	Resources (R)	Values (V)
<i>ECE482-ILO1: Identify real-world problems. (ECE482-CO2)</i>	Scanning of Real-World Problems (ECE482-ILO1) <ul style="list-style-type: none"> Selecting Research Problems, Choosing the Project Study 	Paired critiquing on real-world problems <i>Synchronous</i>	Video clip on real-world problems	Core Value: <i>Committed</i> Sub-Value: <i>Perseverant in scanning real-world problems</i>
<i>ECE482-ILO2: Apply project development process in capstone project. (ECE482-CO3)</i>	Engineering Project Development (ECE482-ILO2) <ul style="list-style-type: none"> Problem Analysis, System Design and Development, Project Implementation, System Evaluation 	Video viewing in youtube in engineering project development <i>Asynchronous</i>	Website in engineering project development	Core Value: <i>Transformational</i> Sub-Value: <i>Adaptive application of engineering project development</i>
<i>ECE482-ILO3: Apply project management in implementation of capstone project. (ECE482-CO3)</i>	Project Management (ECE482-ILO3) <ul style="list-style-type: none"> Project Initiation, Project Planning, Project Execution, Project Monitoring and Controlling, Project Closing 	Video viewing in youtube in project management <i>Asynchronous</i>	Website in project management	Core Value: <i>Service oriented</i> Sub-Value: <i>Diligent implementation in project management</i>
<i>ECE482-ILO4: Design system models and simulations of systems operation. (ECE482-CO1)</i>	System Modelling (ECE482-ILO4) <ul style="list-style-type: none"> Software Modelling, Software Simulation MIDTERM EXAMINATION	Perform a system modelling and simulations of system operation <i>Synchronous</i>	Video clip in system modelling	Core Value: <i>Transformational</i> Sub-Value: <i>Optimistic system modelling</i>
<i>ECE482-ILO5: Design the evaluation process of the developed system. (ECE482-CO1)</i>	System Performance Evaluation (ECE482-ILO5) <ul style="list-style-type: none"> Technical Standards, Environmental Issues, Health and Safety, Ethics 	Design an evaluation process of a developed system <i>Synchronous</i>	Website in system performance evaluation	Core Value: <i>Socially responsive</i> Sub-Value: <i>Accountable in performance evaluation</i>
<i>ECE482-ILO6: Apply engineering economy in the profitability of the project. (ECE482-CO3)</i>	Engineering Economy in Project Profitability (ECE482-ILO6) <ul style="list-style-type: none"> Project Costing, Break-Even Analysis, Return of Investment 	Exhibitions in economic feasibility of the capstone project <i>Asynchronous</i>	Website in engineering economy	Core Value: <i>Socially responsive</i> Sub-Value: <i>Empathetic in project profitability</i>
<i>ECE482-ILO7: Design the research journal for presentation in research conference. (ECE482-CO1)</i>	Engineering Research Journal (ECE482-ILO7) <ul style="list-style-type: none"> IEEE Citation, IEEE Research Journal FINAL EXAMINATION	Participate in crafting the capstone project research journal <i>Synchronous</i>	Website in IEEE research journal	Core Value: <i>Committed</i> Sub-Value: <i>Determined in crafting the research journal</i>



Sample 1: Scope and Sequence Grid

Intended Learning Outcome (ILO)	Course Content (CC)	Teaching Learning & Activity (TLA)	Resources (R)	Values (V)
<i>ECE482-ILO1</i> : Identify real-world problems. (ECE482-CO2)	Scanning of Real-World Problems (ECE482-ILO1) <ul style="list-style-type: none"> • <i>Selecting Research Problems, Choosing the Project Study</i> 	Paired critiquing on real-world problems <i>Synchronous</i>	Video clip on real-world problems	
<i>ECE482-ILO2</i> : Apply project development process in capstone project. (ECE482-CO3)	Engineering Project Development (ECE482-ILO2) <ul style="list-style-type: none"> • <i>Problem Analysis, System Design and Development, Project Implementation, System Evaluation</i> 	Video viewing in youtube in engineering project development <i>Asynchronous</i>	Website in engineering project development	
<i>ECE482-ILO3</i> : Apply project management in implementation of capstone project. (ECE482-CO3)	Project Management (ECE482-ILO3) <ul style="list-style-type: none"> • <i>Project Initiation, Project Planning, Project Execution, Project Monitoring and Controlling, Project Closing</i> 	Video viewing in youtube in project management <i>Asynchronous</i>	Website in project management	
<i>ECE482-ILO4</i> : Design system models and simulations of systems operation. (ECE482-CO1)	System Modelling (ECE482-ILO4) <ul style="list-style-type: none"> • <i>Software Modelling, Software Simulation</i> MIDTERM EXAMINATION	Perform a system modelling and simulations of system operation <i>Synchronous</i>	Video clip in system modelling	
<i>ECE482-ILO5</i> : Design the evaluation process of the developed system. (ECE482-CO1)	System Performance Evaluation (ECE482-ILO5) <ul style="list-style-type: none"> • <i>Technical Standards, Environmental Issues, Health and Safety, Ethics</i> 	Design an evaluation process of a developed system <i>Synchronous</i>	Website in system performance evaluation	
<i>ECE482-ILO6</i> : Apply engineering economy in the profitability of the project. (ECE482-CO3)	Engineering Economy in Project Profitability (ECE482-ILO6) <ul style="list-style-type: none"> • <i>Project Costing, Break-Even Analysis, Return of Investment</i> 	Exhibitions in economic feasibility of the capstone project <i>Asynchronous</i>	Website in engineering economy	
<i>ECE482-ILO7</i> : Design the research journal for presentation in research conference. (ECE482-CO1)	Engineering Research Journal (ECE482-ILO7) <ul style="list-style-type: none"> • <i>IEEE Citation, IEEE Research Journal</i> FINAL EXAMINATION	Participate in crafting the capstone project research journal <i>Synchronous</i>	Website in IEEE research journal	



Sample 1: Scope and Sequence Grid

Intended Learning Outcome (ILO)	Course Content (CC)	Teaching Learning & Activity (TLA)	Resources (R)	Values (V)
<i>ECE482-ILO1: Identify real-world problems. (ECE482-CO2)</i>	Scanning of Real-World Problems (ECE482-ILO1) <ul style="list-style-type: none"> • <i>Selecting Research Problems, Choosing the Project Study</i> 	Paired critiquing on real-world problems <i>Synchronous</i>		
<i>ECE482-ILO2: Apply project development process in capstone project. (ECE482-CO3)</i>	Engineering Project Development (ECE482-ILO2) <ul style="list-style-type: none"> • <i>Problem Analysis, System Design and Development, Project Implementation, System Evaluation</i> 	Video viewing in youtube in engineering project development <i>Asynchronous</i>		
<i>ECE482-ILO3: Apply project management in implementation of capstone project. (ECE482-CO3)</i>	Project Management (ECE482-ILO3) <ul style="list-style-type: none"> • <i>Project Initiation, Project Planning, Project Execution, Project Monitoring and Controlling, Project Closing</i> 	Video viewing in youtube in project management <i>Asynchronous</i>		
<i>ECE482-ILO4: Design system models and simulations of systems operation. (ECE482-CO1)</i>	System Modelling (ECE482-ILO4) <ul style="list-style-type: none"> • <i>Software Modelling, Software Simulation</i> MIDTERM EXAMINATION	Perform a system modelling and simulations of system operation <i>Synchronous</i>		
<i>ECE482-ILO5: Design the evaluation process of the developed system. (ECE482-CO1)</i>	System Performance Evaluation (ECE482-ILO5) <ul style="list-style-type: none"> • <i>Technical Standards, Environmental Issues, Health and Safety, Ethics</i> 	Design an evaluation process of a developed system <i>Synchronous</i>		
<i>ECE482-ILO6: Apply engineering economy in the profitability of the project. (ECE482-CO3)</i>	Engineering Economy in Project Profitability (ECE482-ILO6) <ul style="list-style-type: none"> • <i>Project Costing, Break-Even Analysis, Return of Investment</i> 	Exhibitions in economic feasibility of the capstone project <i>Asynchronous</i>		
<i>ECE482-ILO7: Design the research journal for presentation in research conference. (ECE482-CO1)</i>	Engineering Research Journal (ECE482-ILO7) <ul style="list-style-type: none"> • <i>IEEE Citation, IEEE Research Journal</i> FINAL EXAMINATION	Participate in crafting the capstone project research journal <i>Synchronous</i>		



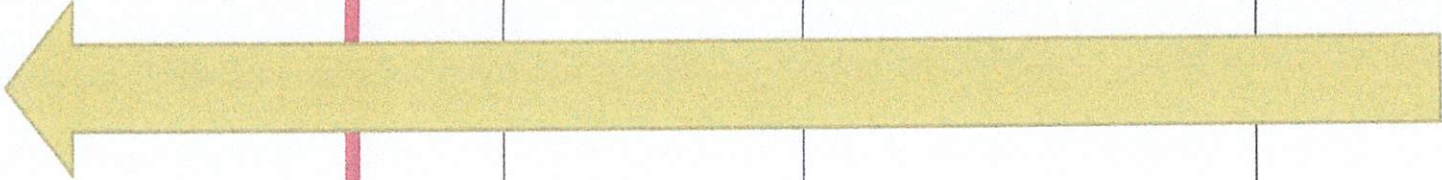
Sample 1: Scope and Sequence Grid

Intended Learning Outcome (ILO)	Course Content (CC)	Teaching Learning & Activity (TLA)	Resources (R)	Values (V)
<i>ECE482-ILO1: Identify real-world problems. (ECE482-CO2)</i>	Scanning of Real-World Problems (ECE482-ILO1) <ul style="list-style-type: none"> • <i>Selecting Research Problems, Choosing the Project Study</i> 			
<i>ECE482-ILO2: Apply project development process in capstone project. (ECE482-CO3)</i>	Engineering Project Development (ECE482-ILO2) <ul style="list-style-type: none"> • <i>Problem Analysis, System Design and Development, Project Implementation, System Evaluation</i> 			
<i>ECE482-ILO3: Apply project management in implementation of capstone project. (ECE482-CO3)</i>	Project Management (ECE482-ILO3) <ul style="list-style-type: none"> • <i>Project Initiation, Project Planning, Project Execution, Project Monitoring and Controlling, Project Closing</i> 			
<i>ECE482-ILO4: Design system models and simulations of systems operation. (ECE482-CO1)</i>	System Modelling (ECE482-ILO4) <ul style="list-style-type: none"> • <i>Software Modelling, Software Simulation</i> <p>MIDTERM EXAMINATION</p>			
<i>ECE482-ILO5: Design the evaluation process of the developed system. (ECE482-CO1)</i>	System Performance Evaluation (ECE482-ILO5) <ul style="list-style-type: none"> • <i>Technical Standards, Environmental Issues, Health and Safety, Ethics</i> 			
<i>ECE482-ILO6: Apply engineering economy in the profitability of the project. (ECE482-CO3)</i>	Engineering Economy in Project Profitability (ECE482-ILO6) <ul style="list-style-type: none"> • <i>Project Costing, Break-Even Analysis, Return of Investment</i> 			
<i>ECE482-ILO7: Design the research journal for presentation in research conference. (ECE482-CO1)</i>	Engineering Research Journal (ECE482-ILO7) <ul style="list-style-type: none"> • <i>IEEE Citation, IEEE Research Journal</i> <p>FINAL EXAMINATION</p>			



"For Nation's Greater Heights"

ILO-V Alignment

INTENDED LEARNING OUTCOMES	TOPICS	TIME FRAME	TEACHING-LEARNING ACTIVITIES	ASSESSMENT TASKS	RESOURCES	VALUES INTEGRATION	REMARKS
Perform managerial functions in the hotel setting <i>efficiently</i>						CV: Committed Sub-value: <i>Efficiency</i>	
Perform managerial functions in the hotel setting <i>with efficiency</i>							

ILO-V Alignment

Values integration must be purposive,
NOT accidental or incidental

Specify the SSCT Core Value and its sub-value

Core Value: Commitment

Sub-Value: Efficiency

HM_ILO: *Perform managerial functions efficiently in the hotel setting*

Core Value: Socially responsive

Sub-Value: Empathy

BEED_LO: *Assess the learners' needs and background with empathy*





ILO-V Alignment

Integrate values either naturally or through the activities

Approach 1: Natural Integration (Lesson)

Topic: OSH Laws and Standards

*Possible Values: SAFETY in the workplace
RESPECT for the rights of others*

Approach 2: Activity-based Integration

Activity: Preparing financial statements

*Possible Values: HONESTY
ACCURACY*



ILO-V Alignment

Transformational

To be transformational means to enable remarkable and significant advancements in the system, setting aside mediocre strategies. A transformational institution adapts to recent trends and developments and continues to strive for novelty and creativity to better attain its quality objectives.

- ***Innovative***

To be innovative is to create something new and trendy. It entails utilizing new ways of doing things and engaging in strategies leading to achieving practical results.

- ***Adaptive***

To be adaptive is to adjust or conform to different situations and to be flexible to accepted and transformed standards. It also means appropriate functioning even in difficult and challenging situations.

- ***Optimistic***

To be optimistic means to look at things and situations with positive mindset and in proper perspectives. It entails finding solutions to problems and achieving affirmative results in all endeavors.



ILO-V Alignment

Committed

To be committed is to take into account the obligations to accomplish the responsibilities or tasks that are expected to perform. A committed institution engages itself to dedicated and unwavering works and services in the pursuit of its goals and objectives.

- ***Determined***

To be determined is to be purposive, firm and goal-driven in accomplishing a task. It entails eagerness to do what needs to be done.

- ***Dedicated.***

To be dedicated is to be devoted and true in doing commitments and decisions while pursuing the goals being set.

- ***Perseverant***

To be perseverant means to be steadfast and positively constant in the face of challenges and setbacks while doing the responsibilities.



ILO-V Alignment

Socially-Responsive

To be socially responsive means to carry on the tasks of contributing to the community on services and concerns that would lead to the best interests of the society as a whole. A socially-responsive institution aims to contribute proactively to the welfare of the community that it serves.

- **Accountable**

To be accountable means to be willing to take the responsibilities accorded to the given tasks while responding to the needs, situations and concerns of the community.

- **Sympathetic**

To be sympathetic is to show compassion, concern, and support to people whatever circumstances and situations they are in.

- **Empathetic**

To be emphatic is to be sensitive and keen to the situations of others, understanding what they think and feeling what they feel.



ILO-V Alignment

CORE VALUE	SUB-VALUE
<p>Service-Oriented To be service-oriented is to aspire to recognize and meet other people's needs, even prior to articulating those necessities. A service-oriented institution actively seeks ways to provide fulfillment and satisfaction on the services rendered to members of the school community.</p>	<ul style="list-style-type: none">• Authentic To be authentic in service means to embrace such culture of seeking to provide for customers' needs, and finding ways to remedy their problems thereby showing empathy and concern for their well-being.• Diligent To be diligent means to stay focused on given tasks, devotedly taking the jobs to meet the goals, and aiming to serve with dedication and commitment.• Helpful To be helpful is to render sympathy and support to people who need assistance and help, acting on their immediate and eventual needs.



"For Nation's Greater Heights"

ILO-V Alignment

Core Values

Service-Oriented

Socially responsive

Committed

Transformational

Service Oriented	Socially responsible	Committed	Transformational
<ul style="list-style-type: none">• Authentic• Diligent• Helpful	<ul style="list-style-type: none">• Accountable• Sympathetic• Empathetic	<ul style="list-style-type: none">• Determined• Dedicated• Perseverant	<ul style="list-style-type: none">• Innovative• Adaptive• Optimistic



"For Nation's Greater Heights"

ILO-R Alignment

INTENDED LEARNING OUTCOMES	TOPICS	TIME FRAME	TEACHING-LEARNING ACTIVITIES	ASSESSMENT TASKS	RESOURCES	VALUES INTEGRATION	REMARKS
<p>SO1 <i>Explain the application of the BOSH principles in the automotive industry (CO1)</i></p> <p>SO2 <i>Identify the areas of concerns in automotive safety (CO1)</i></p>	<p><i>BOSH Framework and Principles</i></p> <p><i>Areas of concerns in automotive safety</i></p> <ul style="list-style-type: none"> • <i>Fire Safety</i> • <i>Electrical Safety</i> • <i>Machine Safety</i> • <i>Environmental Safety</i> • <i>Personal Safety</i> 		<p><i>Video viewing on OSH principles and Q&A about it Synchronous</i></p> <p><i>Paired critiquing of the video on the violated OSH principles Asynchronous</i></p> <p><i>Case analysis of an automotive problem Asynchronous</i></p>		<p><i>Video clip on OSH guidelines</i> https://www.youtube.com/watch?v=2ETeYoCWQWI</p> <p><i>website on OSH laws</i> https://bit.ly/3haREEv</p> <p><i>Multiple Choice test via Quizziz</i> https://quizizz.com/admin/quiz/5e5dce005450b5001b8a0b4e/workplace-health-and-safety</p>		

ILO-R Alignment

I. Printed Materials	II. Audio	III. Visual Aids		IV. Audio Visual
<ol style="list-style-type: none"> 1. Textbooks 2. Supplemental materials <ol style="list-style-type: none"> a. Workbooks b. Duplicated Outlines c. Teacher-prepared study guides d. Reference Books e. Pamphlets f. Magazine Articles g. Newspapers 	<ol style="list-style-type: none"> 1. Radio 2. Recorders 3. iPod 	<ol style="list-style-type: none"> 1. Chalkboard 2. Still Pictures <ol style="list-style-type: none"> a. Non-projected <ol style="list-style-type: none"> 1.1 Photographs 1.2 Illustrations b. Projected <ol style="list-style-type: none"> 1.1 Slides 1.2 Filmstrips 1.3 Opaque projections 1.4 Overhead projections 1.5 LCD projections 1.6 PowerPoint slides 3. Graphic Materials <ol style="list-style-type: none"> a. Charts b. Graphs c. Maps and Globes d. Posters 	<ol style="list-style-type: none"> 4. Exhibits <ol style="list-style-type: none"> a. School-made displays b. Bulletin boards c. Museums 5. Flannel board and felt board 6. Objects <ol style="list-style-type: none"> a. Specimens b. <u>Realias</u> c. Models 	<ol style="list-style-type: none"> 1. Films 2. Television shows 3. Videos



ILO-R Alignment

Types of Resources

- Printed
- Visual
- Audio
- Audio-Visual

Related Terms

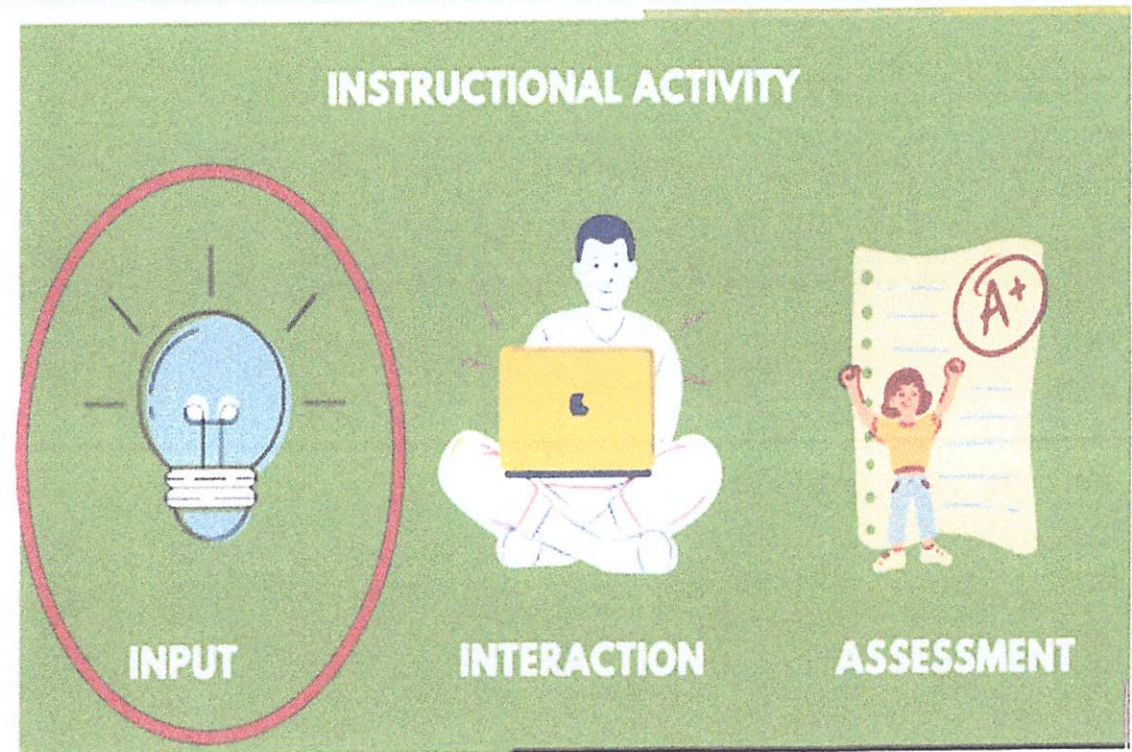
- Instructional Aids
- Resources
- Materials
- Tools – *equipment*
- Facilities
- Media
- Digital Technology



ILO-R Alignment

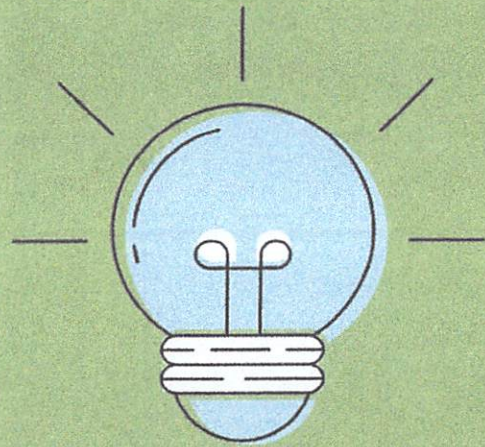
INPUT RESOURCES

1. Slide Presentations
2. Notes and Handouts
3. Videos
4. Websites
5. MOOC



ILO-R Alignment

Use **RESOURCES** based on the type of **ACTIVITY**.



INPUT



INTERACTION



ASSESSMENT





Faint, illegible text at the top of the page, possibly a header or title.

Main body of faint, illegible text, possibly a list or a series of entries, separated by a vertical line.



ILO-TLA Alignment

INTENDED LEARNING OUTCOMES	TOPICS	TIME FRAME	TEACHING-LEARNING ACTIVITIES	ASSESSMENT TASKS	RESOURCES	VALUES INTEGRATION	REMARKS
<p>SO1 <i>Explain the application of the BOSH principles in the automotive industry (CO1)</i></p> <p>SO2 <i>Identify the areas of concerns in automotive safety (CO1)</i></p>	<p><i>BOSH Framework and Principles</i></p> <p><i>Areas of concerns in automotive safety</i></p> <ul style="list-style-type: none"> • <i>Fire Safety</i> • <i>Electrical Safety</i> • <i>Machine Safety</i> • <i>Environmental Safety</i> • <i>Personal Safety</i> 		<p><i>Video viewing on OSH principles and Q&A about it Synchronous</i></p> <p><i>Paired critiquing of the video on the violated OSH principles Asynchronous</i></p> <p><i>Case analysis of an automotive problem Asynchronous</i></p>				





<p>1913</p> <p>1914</p> <p>1915</p>	<p>1916</p> <p>1917</p> <p>1918</p>	<p>1919</p> <p>1920</p> <p>1921</p>	<p>1922</p> <p>1923</p> <p>1924</p>	<p>1925</p> <p>1926</p> <p>1927</p>	<p>1928</p> <p>1929</p> <p>1930</p>
<p>...</p> <p>...</p> <p>...</p>	<p>...</p> <p>...</p> <p>...</p>	<p>...</p> <p>...</p> <p>...</p>	<p>...</p> <p>...</p> <p>...</p>	<p>...</p> <p>...</p> <p>...</p>	<p>...</p> <p>...</p> <p>...</p>
<p>...</p> <p>...</p> <p>...</p>	<p>...</p> <p>...</p> <p>...</p>	<p>...</p> <p>...</p> <p>...</p>	<p>...</p> <p>...</p> <p>...</p>	<p>...</p> <p>...</p> <p>...</p>	<p>...</p> <p>...</p> <p>...</p>
<p>...</p> <p>...</p> <p>...</p>	<p>...</p> <p>...</p> <p>...</p>	<p>...</p> <p>...</p> <p>...</p>	<p>...</p> <p>...</p> <p>...</p>	<p>...</p> <p>...</p> <p>...</p>	<p>...</p> <p>...</p> <p>...</p>
<p>...</p> <p>...</p> <p>...</p>	<p>...</p> <p>...</p> <p>...</p>	<p>...</p> <p>...</p> <p>...</p>	<p>...</p> <p>...</p> <p>...</p>	<p>...</p> <p>...</p> <p>...</p>	<p>...</p> <p>...</p> <p>...</p>

ILO-TLA Alignment

D. Specify the activities by linking them to the topic

Learning VERB
EXPLAIN



Learning TASK

*Team discussion **on the safety guidelines***

Learning VERB
IDENTIFY



Learning TASK

*Pointing out **essential components of an effective marketing plan***





ILO-TLA Alignment

C. Always consider the alignment or congruence of the activities to the skills of the LOs.

Alignment of TLAs to the LOs

Learning VERB
EXPLAIN



Learning TASK

Team discussion *on the safety guidelines*

Learning VERB
IDENTIFY



Learning TASK

Concept mapping *the essential components of an effective marketing plan*

Learning VERB
PERFORM



Learning TASK

Demonstration *on techniques of table serving*



1948

1948

1948

1948

1948

1948

1948

1948

1948

1948

1948

1948

ILO-TLA Alignment

B. Always consider the alignment or congruence of the activities to the skills of the LOs.

Interactions



Input



Assessment





Input

Assessment

Interactions

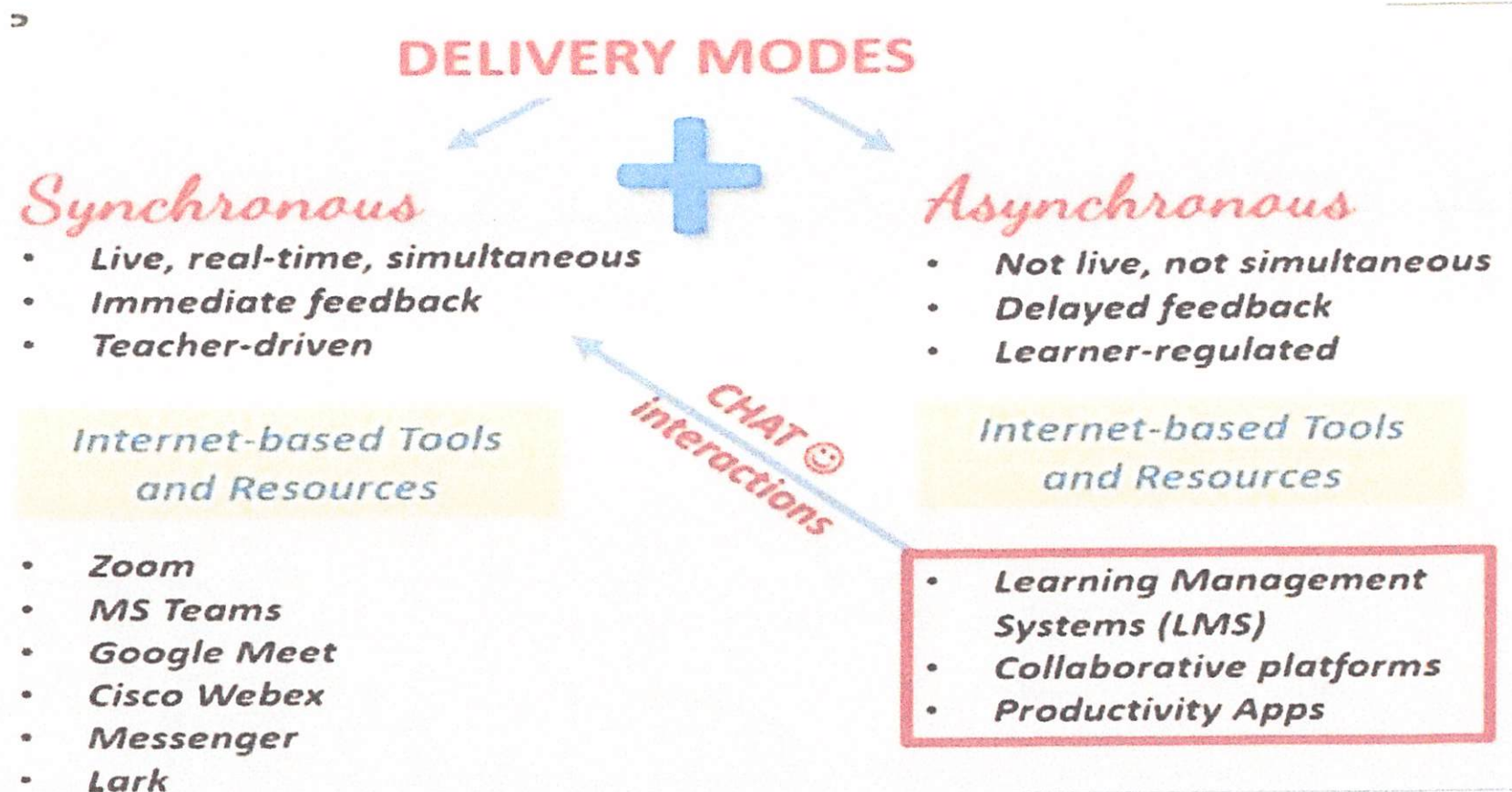
activities to the skills of the LOs

B. Always consider the alignment or congruence of the

Learning Objectives

ILO-TLA Alignment

A. To manage blended learning, decide on the TL Activities purposively





- Rank
- Messenger
- Class Minder
- Google Meet
- MS Teams
- Zoom

One-on-One

- Immediate feedback
- Feedback loop

- Productivity Apps
- Collaborative platforms
- Systems (LMS)
- Learning Management

- Delayed feedback
- Peer review

A. To manage blended learning, decide on the IT Activities

but positively

ILO-TLA Alignment

BLENDED APPROACH

Synchronous
Asynchronous

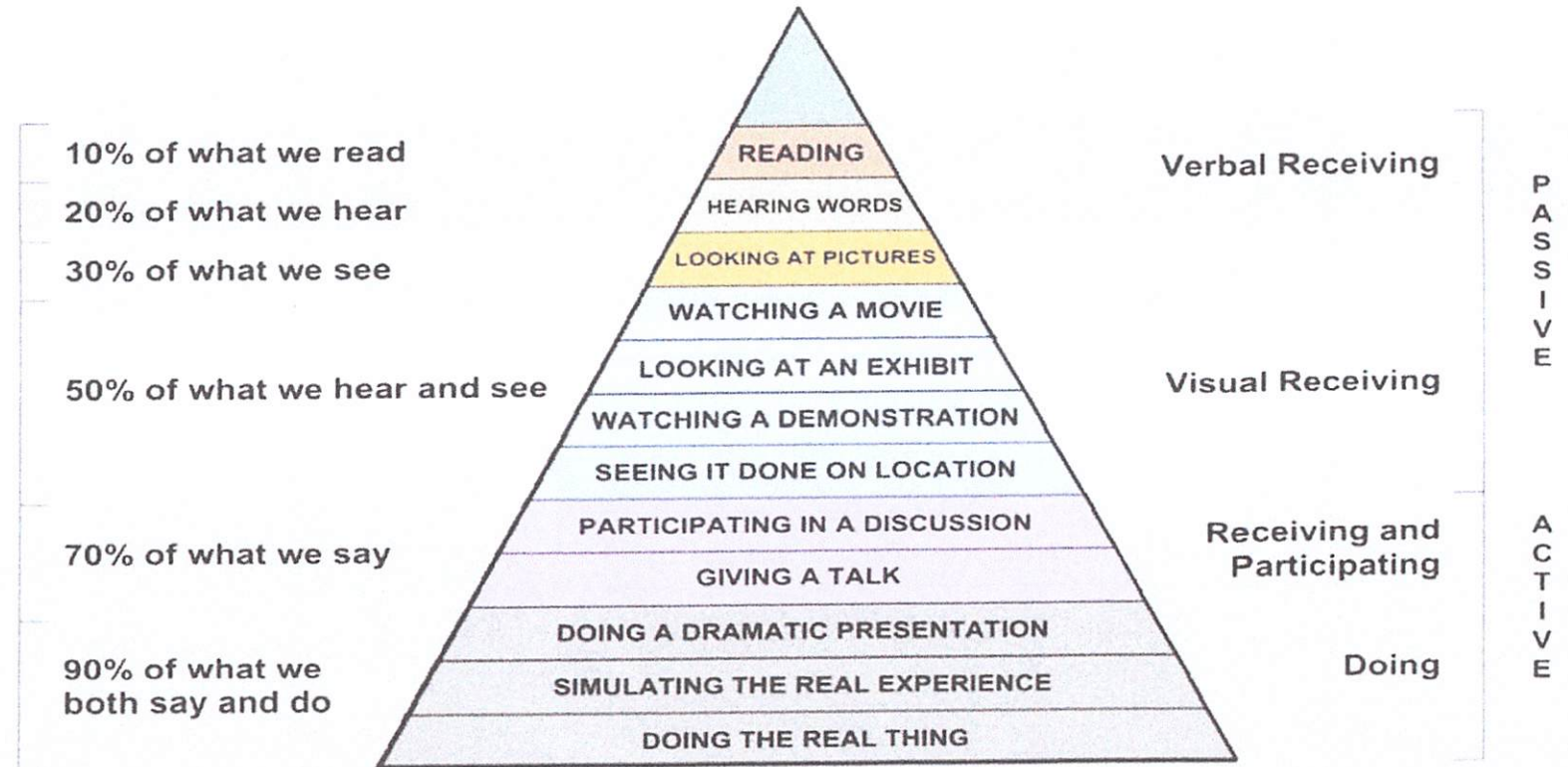


"For Nation's Greater Heights"

CONE OF LEARNING

WE TEND TO REMEMBER OUR LEVEL OF INVOLVEMENT

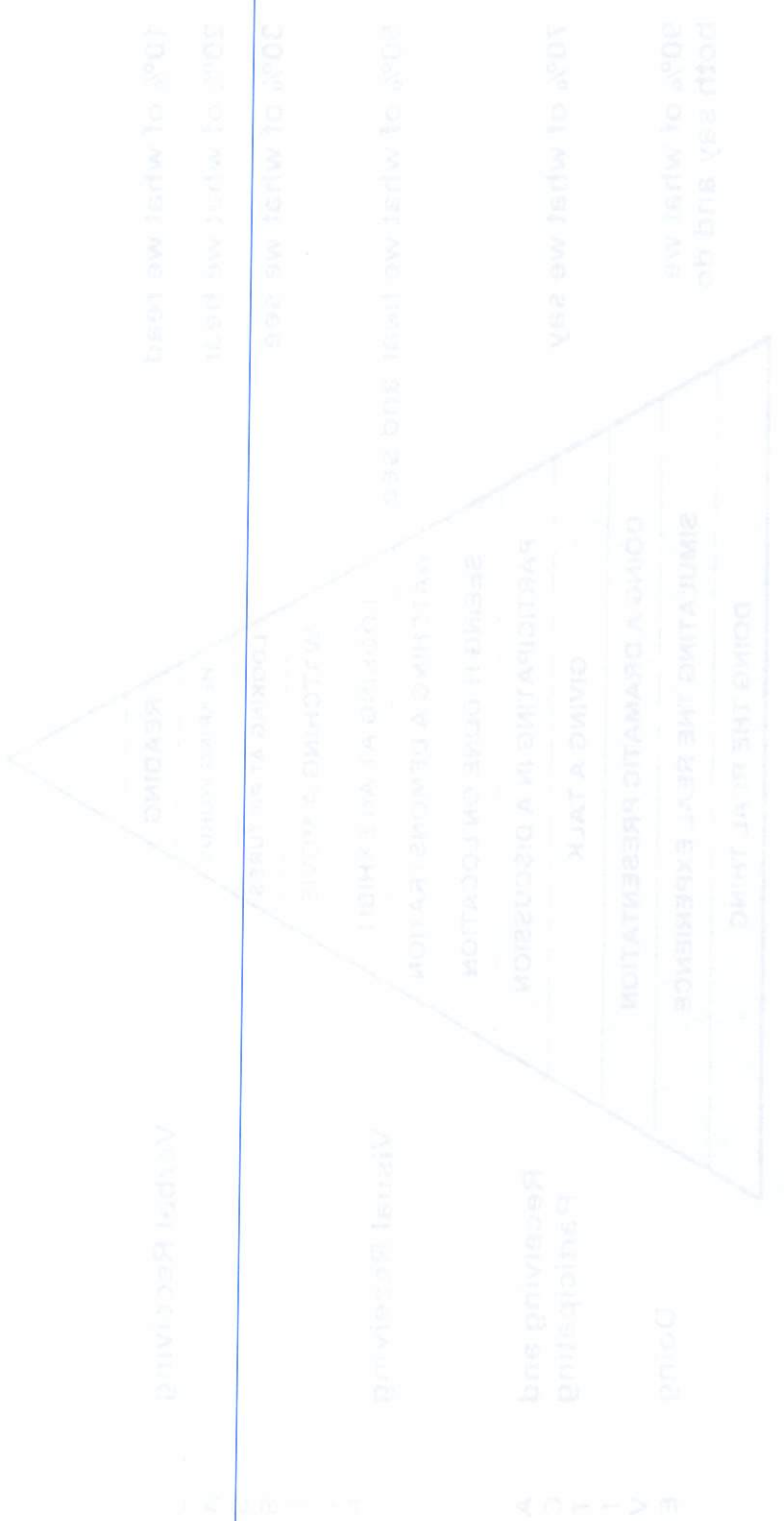
(developed and revised by Bruce Hyland from material by Edgar Dale)



Edgar Dale, *Audio-Visual Methods in Teaching* (3rd Edition). Holt, Rinehart, and Winston (1969).



Source: Dale, Audio-Visual Methods in Teaching, 12, 13th ed., Holt, Rinehart and Winston (1969)



WE TEND TO REMEMBER OUR LEVEL OF INVOLVEMENT
CONE OF LEARNING

Verbal Receiving
Participating and Receiving
Doing

BLENDING APPROACH

How to Blend

the Cone of Experience and the Cone of Learning



Session II



ILO-TLA-R-V Alignment

OBTL Syllabus Components

Intended Learning Outcome (ILO)	Course Content (CC)	Time Frame	Teaching Learning & Activity (TLA)	Assessment Task (AT)	Resources (R)	Values (V)	Remarks

Constructive Alignment





"For Nation's Greater Heights"

Republic of the Philippines
SURIGAO STATE COLLEGE OF TECHNOLOGY
Narciso Street, Surigao City



CERTIFICATE NUMBER: AJA19-0225

College : **College of Engineering**
Program : **Bachelor of Science in Electrical Engineering**
Job/ Occupation : **ELECTRICAL ENGINEER**

DUTIES	TASKS					
1. diagnose electrical problems using the electrical diagrams or blue print (as built electrical plans)	Gather information	Understand the malfunction	Identify the parameters to be diagnose	Identify the source of the problem	Correct and verify the repair	Performed root cause analysis
WORK BEHAVIORS						
DUTY 1: diagnose the problem						
SKILLS:	KNOWLEDGE:		ATTITUDES:			
Problem solving skills	Excellent understanding in all electrical circuit analysis		Efficient in problem solving with a timely fashion without difficulty Can easily and effectively identify root causes and recommend exact solution			



"For Nation's Greater Heights"



CERTIFICATE NUMBER: AJA19-0225

DUTIES 2	TASKS					
2. install, repair, and maintenance electrical power systems(building wiring, controls, electrical machines and transformers)	Install an ideal method of reducing possible issues that may arise in the future	Perform basic installation , repair and maintenance of electric power systems equipment.	Determine the best course of action in starting the work	Protect delicate pieces of installation		
	Perform four fundamental operations					
WORK BEHAVIORS						
DUTY 2: Install and repair electrical system						
SKILLS:		KNOWLEDGE:		ATTITUDES:		
Strong technical, theoretical and hands - on ability.		Well experience in installation, repair and maintenance of electrical power systems.		Team player		



DUTIES 3	TASKS					
FACILITIES MANAGER	Know electrical operation of the building	Provide strong leadership	Work under time pressure	Disseminate communication effectively.		
WORK BEHAVIORS						
SKILLS:		KNOWLEDGE:			ATTITUDES:	
Proven managerial ability that commands strong leadership who can work under pressure with an effective communication skills to his subordinate		Expert in managerial and organizational functions			Output oriented	



"For Nation's Greater Heights"

Republic of the Philippines
SURIGAO STATE COLLEGE OF TECHNOLOGY
 Narciso Street, Surigao City



CERTIFICATE NUMBER: AJA19-0225

DUTIES 4	TASK					
Power Plant Manager	Manage power plant operation	Supervise the work and duties of electrical engineers	Provide knowledge to subordinate through effective communication	Assign specific duties and responsibilities	Schedule technical work.	
SKILLS:		KNOWLEDGE:		ATTITUDES:		
Proven managerial and power plant operation ability		Expert in managerial and operational functions.		GOAL oriented		

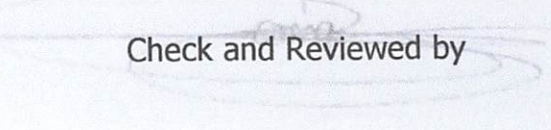


DUTIES	TASKS					
5. ELECTICAL RESEARCHERS, PROFESSOR AND FACULTY	Conduct research	Perform as an educator	Coordinate LGU'S and non-LGU's in research			
WORK BEHAVIORS						
SKILLS:		KNOWLEDGE:		ATTITUDES:		
Highly skilled in electrical engineering practices and applications		Has an in-depth understanding in all electrical engineering foundation and sciences.		Passionate in electrical work and knowledge-sharing.		

Prepared by


 ENGR. VICENTE Z. DELANTE
 EE CHAIRPERSON

Check and Reviewed by


 ENGR. RICHARD T. SAING
 UNIDO / UNDP SR. EE ADVISOR



"For Nation's Greater Heights"

Document Code No.	FM-SSCT-ACAD-002
Revision No.	00
Effective Date	20 September 2018
Page No.	1 of 11

COLLEGE OF ENGINEERING AND INFORMATION TECHNOLOGY
City Campus
Second Semester, Academic Year 2021-2022

Outcomes Based-Education (OBE) Syllabus in EE 202
ELECTRICAL CIRCUITS 2
Course Credit: 4.0unitslec.(108hrs)

Institutional Vision, Mission, and Goals

Vision:

An innovative and technologically-advanced State College in Caraga.

Mission:

To provide relevant,

- a. high quality and sustainable instruction,
- b. research, production and extension programs and
- c. services within a culture of credible and responsive institutional governance.

Goals:

1. Foster application of the discipline and provide its learner with industry-based training and education particularly in engineering, technology and fisheries.
2. Conduct and utilize studies for the development of new products, systems and services relevant to Philippine life and of the global village.
3. Promote transfer of technology and spread useful technical skills, thus empowering its learners and their activities.

SSCT Core Values

Service-Oriented Socially Responsive Committed Transformational

SSCT Quality Policy

Surigao State College of Technology provides quality instruction, research, extension programs and production services to satisfy its customers by responding to their needs and expectations and continually improving its quality management system.



Document Code No.	FM-SSCT-ACAD-002
Revision No.	00
Effective Date	20 September 2018
Page No.	2 of 11

Institutional Graduate Attributes (IGA)

- :
- Visionary Leader
 - Effective Communicator
 - Competent Technologist
 - Self-Directed Lifelong Learner

Program Goals

The Electrical Engineering program aims to design and apply the generation, transmission, and distribution of electrical energy to produce competent engineers that exhibit positive work ethics and flexibility in work conditions for the development of Caraga.

Program Educational Objectives (PEO) and Relationship to Institutional Mission

Program Educational Objectives (PEO)	Mission		
	a	b	c
EE-PEO1. Demonstrate professionalism in electrical engineering and apply professional ethics thru communication and collaboration.	/	/	/
EE-PEO2. Use appropriate techniques, resources, and modern tools necessary for analysis, design, and modelling of complex electrical systems	/	/	/
EE-PEO3. Plan, lead, and implement designated tasks, interact with other engineering professionals, and take leadership roles in electrical engineering organization.	/	/	/
EE-PEO4. Engage in lifelong learning able to discover new opportunities for continuing personal and professional development in electrical engineering	/	/	/

Program Outcomes (PO) and Relationship to Program Educational Objectives (PEO)

Program Outcomes (PO)	Program Educational Objectives (PEO)			
	1	2	3	4
EE-POa. Apply knowledge of mathematics and sciences to solve complex engineering problems				
EE-POb. Develop and conduct appropriate experimentation, analyze and interpret data	/	/	/	/
EE-POc. Design a system, component, or process to meet desired needs within				



Document Code No.	FM-SSCT-ACAD-002
Revision No.	00
Effective Date	20 September 2018
Page No.	3 of 11

realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability, in accordance with standards				
EE-POd.Function effectively on multi-disciplinary and multi-cultural teams that establish goals, plan tasks, and meet deadlines				
EE-POe.Identify, formulate, and solve complex problems in electrical engineering	/	/	/	/
EE-POf.Recognize ethical and professional responsibilities in engineering practice				
EE-POg.Communicate effectively with a range of audiences	/	/	/	/
EE-POh.Understand the impact of engineering solutions in a global, economic, environmental, and societal context				
EE-POi.Recognize the need for additional knowledge and engage in lifelong learning				
EE-POj.Articulate and discuss the latest developments in the field of electrical engineering				
EE-POk.Apply techniques, skills, and modern engineering tools necessary for electrical engineering practice				
EE-POl.Demonstrate knowledge and understanding of engineering and management principles as a member and/or leader in a team to manage projects in multidisciplinary environments				

Course Description

The course deals with sinusoidal steady-state analysis in the frequency domain; AC circuit power analysis; analysis of polyphase circuits and magnetically-coupled circuits; frequency response; per unit system and symmetrical components; and two-port networks

DACUM Main Duties (DMD)

- EE-DMD1. Diagnose electrical problems using the electrical diagrams or blue print (as built electrical plans)
- EE-DMD2. Install, repair, and maintenance electrical power systems(building wiring, controls, electrical machines and transformers)
- EE-DMD3. Facilities Manager
- EE-DMD4. Power Plant Manager
- EE-DMD5. Electrical Researchers, Professor and Faculty



"For Nation's Greater Heights"

Course Outcomes (CO) and Relationship to Program Outcomes (PO)

Program Outcome (PO) / Level	Course Outcomes (CO)	Assessment Task (CO-AT)	DACUM Links				
			1	2	3	4	5
EE-POb(Enabling). Develop and conduct appropriate experimentation, analyze and interpret data	EE201-CO1: Develop and conduct electrical engineering experimentations and then analyze and interpret the data.	Students conduct electrical engineering experiments. These experiments serve as a group activity where they will analyze and interpret data. Criteria – Functionality and lab report Total Points: 100 points	/	/			/
EE-POe(Enabling). Identify, formulate, and solve complex problems in electrical engineering.	EE201-CO2: Calculate complex electrical engineering problems related to electric circuit theory.	Students calculate sets of electrical engineering problems using the electric circuit theory concepts. Criteria – 70% correct answers and solutions Total Points: 100 points	/				/
EE-POg(Enabling). Communicate effectively with a range of audiences	EE201-CO3: Communicate effectively with the team, group or other range of audiences when conducting experiments and solving problems in electrical engineering.	Students create a group project and present them in the class. Criteria – creativity, functionality, delivery Total Points: 100 points			/	/	/

Course Outcomes (CO) and Relationship to Intended Learning Outcomes (ILO)

Course Outcomes (CO)	Intended Learning Outcomes (ILO)
EE201-CO1: Develop and conduct electrical engineering experimentations and then analyze	EE202-ILO1: Apply the circuit theorems and techniques used in DC to analyse AC circuits.(EE201-CO2)



Document Code No.	FM-SSCT-ACAD-002
Revision No.	00
Effective Date	20 September 2018
Page No.	5 of 11

<p>and interpret the data.</p> <p><i>EE201-CO2:</i> Calculate complex electrical engineering problems related to electric circuit theory.</p> <p><i>EE201-CO3:</i> Communicate effectively with the team, group or other range of audiences when conducting experiments and solving problems in electrical engineering.</p>	<p><i>EE202-ILO2:</i> Recognize the essential concepts used in AC power analysis. (EE201-CO1)</p> <p><i>EE202-ILO3:</i> Calculate electrical engineering problems related to AC power analysis. (EE201-CO2)</p> <p><i>EE202-ILO4:</i> Analyse balanced and unbalanced three-phase circuits. (EE201-CO1)</p> <p><i>EE202-ILO5:</i> Analyse magnetically coupled circuits. (EE201-CO1)</p> <p><i>EE202-ILO6:</i> Analyse the concepts of transfer function, series and parallel resonance, and basic filter design. (EE201-CO1)</p> <p><i>EE202-ILO7:</i> Recognize the concept of per-unit and understand its significance in power system analysis. (EE201-CO2)</p> <p><i>EE202-ILO8:</i> Recognize the concept of symmetrical components in the analysis of unbalanced three-phase power system. (EE201-CO2)</p> <p><i>EE202-ILO9:</i> Recognize the various two-port parameters to analyse electrical/electronic circuits. (EE201-CO3)</p>
---	--

Detailed Course Content

Intended Learning Outcomes (ILO)	Topics	Time Frame	Teaching and Learning Activities(TLA)	Assessment Tasks (ILO-AT)	Target	Resources	Values Integration	Remarks
<i>EE202-ILO1:</i> Apply the circuit theorems and techniques used in DC	1. SINUSOIDAL STEADY-STATE ANALYSIS	10 hrs.	Learning Module 1 <i>Asynchronous</i>	Problem analysis quiz and assignment	70% of the students shall have	Learning module and videos on	Core Value: <i>Transformational</i>	



Document Code No.	FM-SSCT-ACAD-002
Revision No.	00
Effective Date	20 September 2018
Page No.	6 of 11

to analyse AC circuits.(EE201-CO2)	<ol style="list-style-type: none"> 1.1. <i>Nodal and Mesh Analysis</i> <ol style="list-style-type: none"> 1.1.1 <i>Nodal Analysis</i> 1.1.2 <i>Mesh Analysis</i> 1.2. <i>Superposition Theorem</i> 1.3. <i>Source Transformation</i> 1.4. <i>Thevenin's and Norton's Theorems</i> 			on sinusoidal steady-state analysis.	a rating of at least 3.0	sinusoidal steady-state analysis Multisim	Sub-Value: <i>Adaptive application of circuit techniques and theorems to analyse ac circuits</i>	
<p>EE202-ILO2: Recognize the essential concepts used in AC power analysis.(EE201-CO1)</p> <p>EE202-ILO3: Calculate electrical engineering problems related to AC power analysis.(EE201-CO2)</p>	2. AC POWER ANALYSIS <ol style="list-style-type: none"> 2.1. <i>Instantaneous and Average Power</i> 2.2. <i>Maximum Average Power Transfer</i> 2.3. <i>Effective or RMS Value</i> 2.4. <i>Apparent Power and Power Factor</i> 2.5. <i>Complex Power</i> 2.6. <i>Conservation of AC Power</i> 2.7. <i>Power Factor Correction</i> 	14 hrs.	Learning Module 2 <i>Asynchronous</i>	Problem analysis quiz and assignment on ac power analysis.	70% of the students shall have a rating of at least 3.0	Learning module and videos on ac power analysis Multisim	Core Value: <i>Committed</i> Sub-Value: <i>Dedicated analysis of ac power</i>	
EE202-ILO4: Analyse	3. ANALYSIS OF	14 hrs.	Learning Module 3	Problem	70% of the	Learning	Core Value:	



"For Nation's Greater Heights"

balanced and unbalanced three-phase circuits.(EE201-CO1)	POLYPHASE CIRCUITS 3.1. <i>Balanced Three-Phase Voltages</i> 3.2. <i>Balanced Wye-Wye Connection</i> 3.3. <i>Balanced Wye-Delta Connection</i> 3.4. <i>Balanced Delta-Delta Connection</i> 3.5. <i>Balanced Delta-Wye Connection</i> 3.6. <i>Power in a Balanced System</i> 3.7. <i>Unbalanced Three-Phase Systems</i> 3.8. <i>Three-Phase Power Measurement</i>		<i>Asynchronous</i>	analysis quiz and assignment on three-phase circuits	students shall have a rating of at least 3.0	module and videos on the analysis of polyphase circuits Multisim	<i>Committed</i> Sub-Value: <i>Perseverant in the analysis of polyphase circuits</i>	
EE202-ILO5: Analyse magnetically coupled circuits.(EE201-CO1)	4. ANALYSIS OF MAGNETICALLY-COUPLED CIRCUITS 4.1. <i>Mutual Inductance</i> 4.2. <i>Energy in a Coupled Circuit</i> 4.3. <i>Linear Transformers</i> 4.4. <i>Ideal</i>	12 hrs.	Learning Module 4 <i>Asynchronous</i>	Problem analysis quiz and assignment on magnetically-coupled circuits	70% of the students shall have a rating of at least 3.0	Learning module and videos on the analysis of magnetically-coupled circuits. Multisim	Core Value: <i>Transformational</i> Sub-Value: <i>Adaptive application of mutual inductance in the analysis of magnetically-coupled circuits</i>	



"For Nation's Greater Heights"

	4.5. <i>Transformers Ideal Autotransformers</i>							
MIDTERM EXAMINATION- 2.0 Hrs.								
<i>EE202-ILO6: Analyse the concepts of transfer function, series and parallel resonance, and basic filter design.(EE201-CO1)</i>	5. FREQUENCY RESPONSE <i>5.1. Transfer Function 5.2. Series Resonance 5.3. Parallel Resonance 5.4. Basic Filter Design</i>	10 hrs.	Learning Module 5 <i>Asynchronous</i>	Problem analysis quiz on frequency response	70% of the students shall have a rating of at least 3.0	Learning module and videos on frequency response	Core Value: <i>Committed</i> Sub-Value: <i>Determined analysis of the frequency response of electrical circuits</i>	
<i>EE202-ILO7: Recognize the concept of per-unit and understand its significance in power system analysis.(EE201-CO2)</i>	6. PER UNIT SYSTEM <i>6.1. Single-Phase Systems 6.2. Change of Base 6.3. Three-Phase Systems</i>	14 hrs.	Learning Module 6 <i>Asynchronous</i>	Problem analysis quiz and assignment on per-unit system	70% of the students shall have a rating of at least 3.0	Learning module and videos on per-unit system	Core Value: <i>Transformational</i> Sub-Value: <i>Optimistic application of per unit system in the analysis of power systems</i>	
<i>EE202-ILO8: Recognize the concept of symmetrical components in the analysis of unbalanced three-phase power system.(EE201-CO2)</i>	7. SYMMETRICAL COMPONENTS OF UNBALANCED 3-PHASE VOLTAGES AND CURRENTS	14 hrs.	Learning Module 7 <i>Asynchronous</i>	Problem analysis quiz and assignment on symmetrical components	70% of the students shall have a rating of at least 3.0	Learning module and videos symmetrical components.	Core Value: <i>Transformational</i> Sub-Value: <i>Adaptive analysis of unbalanced 3-phase voltages</i>	



"For Nation's Greater Heights"

							<i>and currents</i>	
<i>EE202-ILO9: Recognize the various two-port parameters to analyse electrical/electronic circuits.(EE201-CO3)</i>	8. ANALYSIS OF TWO-PORT NETWORKS 8.1. <i>Impedance Parameters</i> 8.2. <i>Admittance Parameters</i> 8.3. <i>Hybrid Parameters</i> 8.4. <i>Transmission Parameters</i> 8.5. <i>Relationships Between Parameters</i> 8.6. <i>Network Interconnection</i>	12 hrs.	Learning Module 8 <i>Asynchronous</i>	Problem analysis quiz on two-port networks	70% of the students shall have a rating of at least 3.0	Learning module and videos on analysis of two-port networks.	Core Value: <i>Committed</i> Sub-Value: <i>Determined application of two-port networks to analyse electrical circuits</i>	
FINAL EXAMINATION – 2.0 Hrs.								

References:

Charles Alexander & Matthew Sadiku (2016).*Fundamentals of Electric Circuits*.6th ed. McGraw-Hill Education
 HemchandraMadhusudanShertukde (2019). *Power System Analysis Illustrated with MATLAB and ETAP*. CRC Press Taylor and Francis Group
 J. Duncan Glover, Thomas J. Overbye, &Mulukutla S. Sarma (2017).*Power System Analysis & Design*. 6th ed. Cengage Learning
 Turan Gönen (2014).*Electric Power Distribution Engineering*. 3rd ed. CRC Press, Taylor & Francis Group
 MahmoodNahvi, PhD. & Joseph A. Edminister (2017).*Schaum's Outlines of Electric Circuits*. 7thed. McGraw-Hill Education

Course Requirements:

- Laboratory Reports(CO-AT1)
- Portfolio of solved Problems(CO-AT2)
- Group Project(CO-AT3)
- Quizzes and Assignments



"For Nation's Greater Heights"

- Midterm and Final exams

Course Evaluation:

<u>Criteria</u>	<u>Lecture Grade</u>
➤ Quizzes and online outputs/interaction (ILO-AT)	20%
➤ Performance Tasks (CO-AT)	40%
➤ Major Exams (Midterm and Final)	40%
TOTAL	100%

Grade Computation: $\frac{\text{Midterm Grade} + \text{Final Grade}}{2} = \text{Average Grade}$

<u>Grade Point</u>	<u>Description</u>
1.0	Excellent
1.5 – 1.1	Very Good
2.0 – 1.6	Highly Satisfactory
2.5 – 2.1	Good
2.9 – 2.6	Satisfactory
3.0	Passing
5.0	Failed due to poor performance, absences, withdrawal without notice
DRP	Dropped with approved dropping slip
INC	Incomplete requirements but w/ passing class standing. INC is for non-graduating students only
NG	No Grade

Source: SSCT Student Handbook

Course Policies:

1. Attendance shall be checked in every class session in the Google Meet. This is to monitor the absences incurred by the students in terms of the allowable number of absences for a course as stipulated in the Student Handbook.
2. During online classes, video camera shall be turned on all the time and microphone shall be turned off. The microphone shall be unmuted only if the student's name is called to participate in class discussion.
3. Major examinations in multiple-choice type shall be done online. For problem solving type, detailed solutions shall be written legibly in separate sheets of paper



Document Code No.	FM-SSCT-ACAD-002
Revision No.	00
Effective Date	20 September 2018
Page No.	11 of 11

"For Nation's Greater Heights"

and shall be converted to pdf form prior to submission.

4. Cheating in major examinations which include attempts to defraud, deceive, or mislead the instructor in arriving at an honest assessment shall entail zero score.
5. Plagiarism which is a form of cheating that involves presenting the ideas or work of another as one's own work shall entail zero score.
6. Projects shall be submitted on or before the deadline. Students who submit unsatisfactory projects shall be given the chance to improve their works on the condition that they resubmit the revised outputs on the date set by the instructor. Non-submission of a project on the deadline shall entail zero score.
7. An INC grade shall be given to students who fail to submit the course requirements of at least 95% of the projects and quizzes or failure to take the major examinations.

Revision History:

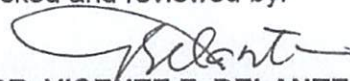
Revision No.	Revised by	Date of Revision	Date of Implementation	Highlight of Revision
1	Engr. Vernon V. Liza	July 19, 2021	August 23, 2021	Followed OBTL Format as per CMO #101 S. 2017
2	Engr. Vernon V. Liza	January 25, 2021	February 7, 2021	DACUM Workshop vis-à-vis CMO No. 101 S. 2017

Prepared by:


ENGR. VERNON V. LIZA
 Guest Lecturer

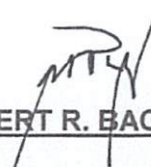
Date: 1-25-2022

Checked and reviewed by:


ENGR. VICENTE Z. DELANTE, MEng'g
 Program Chair, BSEE

Date: 1-25-2022

Noted by:


ENGR. ROBERT R. BACARRO, MECE, MBA
 Dean, CEIT


Date: 1-28-2022

Recommended by:


RONITA E. TALINGTING, PhD
 Campus Director

Date: 1-31-2022

Approved by:


EMMYLOU A. BORJA, EdD
 VP for Academic Affairs

Date: 1-31-2022