

**HOLY ANGEL UNIVERSITY**  
**SCHOOL OF ENGINEERING AND ARCHITECTURE**  
**BACHELOR OF SCIENCE IN ELECTRONICS ENGINEERING (BSECE)**

Program Code: ELECENG  
EFFECTIVE SCHOOL YEAR 2018-2019 (with Amendments)

COURSE CODE	COURSE TITLE	LEC HRS	LAB HRS	CREDIT UNITS	PREREQUISITE(S)/ CO-REQUISITE(S)
<b>FIRST YEAR, FIRST SEMESTER</b>					
1PURCOMM	Purposive Communication	3	0	3	None
2MATHMWORLD	Mathematics in the Modern World	3	0	3	None
CALC1	Calculus 1 (Differential)	3	0	3	None
CHEMENG	Chemistry for Engineers	3	0	3	None
CHEMENGL	Chemistry for Engineers Laboratory	0	3	1	Co-req: CHEMENG
CADRAFTING	Computer-Aided Drafting	0	3	1	None
4FYE1	Big History 1: Big Bang to the Future	3	0	3	None
THEOLOGY101	Theological Foundations: Judeo-Christian Tradition and Sacred Scriptures	3	0	3	None
7PE1	PE 1 - Movement Enhancement	2	0	2	None
CWTS1	Civic Welfare Training Service	0	3	3	None
<b>TOTAL</b>		<b>20</b>	<b>9</b>	<b>25</b>	

**FIRST YEAR, SECOND SEMESTER**

CALC2	Calculus 2 (Integral)	3	0	3	CALC1
EPHYSICS	Physics for Engineers	3	0	3	CALC1, Co-req: CALC2
EPHYSICSL	Physics for Engineers Laboratory	0	3	1	CALC1, Co-reqs: CALC2, EPHYSICS
EPHYSICS2	Physics 2	3	0	3	CALC1, Co-reqs: CALC2, EPHYSICS
EPHYSICS2L	Physics 2 Laboratory	0	3	1	CALC1, Co-reqs: CALC2, EPHYSICS2
COMFUN1	Computer Fundamentals and Programming 1	0	3	1	None
4FYE2	Big History 2: Looking through the Lens of Big History	3	0	3	4FYE1
THEOLOGY102	Special Issues in Catholic Theology	3	0	3	THEOLOGY101
7PE2	PE 2 - Fitness Exercises	2	0	2	7PE1
CWTS2	Civic Welfare Training Services 2	0	3	3	CWTS1
<b>TOTAL</b>		<b>17</b>	<b>12</b>	<b>23</b>	

**SECOND YEAR, FIRST SEMESTER**

4CONWORLD	The Contemporary World	3	0	3	None
4UNDERSELF	Understanding the Self	3	0	3	None
MATERIALS	Materials Science and Engineering	3	0	3	CHEMENG, CHEMENGL
CIRCUITS1	Circuits 1	3	0	3	EPHYSICS2, EPHYSICS2L
CIRCUITS1L	Circuits 1 Laboratory	0	3	1	EPHYSICS2, EPHYSICS2L, Co-req: CIRCUITS1
EDEVICES	Electronic Devices and Circuits	3	0	3	EPHYSICS2, EPHYSICS2L, Co-reqs: CIRCUITS1, CIRCUITS1L
EDEVICESL	Electronic Devices and Circuits Laboratory	0	3	1	EPHYSICS2, EPHYSICS2L, Co-reqs: CIRCUITS1, CIRCUITS1L, EDEVICES
COMFUN2	Computer Fundamentals and Programming 2	0	3	1	COMFUN1
ENGDATA	Engineering Data Analysis	3	0	3	CALC1
DIFFEQNS	Differential Equations	3	0	3	CALC2
7PE3	PE 3 - Physical Activities towards Health and Fitness 1	2	0	2	7PE2
<b>TOTAL</b>		<b>23</b>	<b>9</b>	<b>26</b>	

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<b>SECOND YEAR, SECOND SEMESTER</b>					
ADVENGMATH	Advanced Engineering Mathematics for ECE	3	3	4	DIFFEQNS
ELECTROMAG	Electromagnetics	4	0	4	DIFFEQNS
CIRCUITS2	Circuits 2	3	0	3	CIRCUITS1, CIRCUITS1L
CIRCUITS2L	Circuits 2 Laboratory	0	3	1	CIRCUITS1, CIRCUITS1L, Co-req: CIRCUITS2
ECKTSAD	Electronic Circuit Analysis and Design	3	0	3	EDEVICES, EDEVICESL
ECKTSADL	Electronic Circuit Analysis and Design Laboratory	0	3	1	EDEVICES, EDEVICESL, Co-req: ECKTSAD
COMSYSTEMS	Principles of Communication Systems	3	0	3	EDEVICES, EDEVICESL, Co-reqs: ECKTSAD, ECKTSADL
COMSYSTEMSL	Principles of Communication Systems Laboratory	0	3	1	EDEVICES, EDEVICESL, Co-reqs: ECKTSAD, ECKTSADL, COMSYSTEMS
THEOLOGY103	Christian Spirituality in the Contemporary World	3	0	3	THEOLOGY102
7PE4	PE 4 - Physical Activities towards Health and Fitness 2	2	0	2	7PE3
<b>TOTAL</b>		<b>21</b>	<b>12</b>	<b>25</b>	

**THIRD YEAR, FIRST SEMESTER**

3FIL1	Konstekswalisadong Komunikasyon sa Filipino	3	0	3	None
ENGGECON	Engineering Economics	3	0	3	2nd Year Standing
SIGSPECTRA	Signals, Spectra and Signal Processing	3	0	3	ADVENGMATH
SIGSPECTRAL	Signals, Spectra and Signal Processing Laboratory	0	3	1	ADVENGMATH, Co-req: SIGSPECTRA
ESYSTEMS	Electronic Systems and Design	3	0	3	ECKTSAD, ECKTSADL
ESYSTEMSL	Electronic Systems and Design Laboratory	0	3	1	ECKTSAD, ECKTSADL, Co-req: ESYSTEMS
LOGICSWITCH	Logic Circuits and Switching Theory	3	0	3	EDEVICES, EDEVICESL
LOGICSWITCHL	Logic Circuits and Switching Theory Laboratory	0	3	1	EDEVICES, EDEVICESL, Co-req: LOGICSWITCH
MODCODING	Modulation and Coding Techniques	3	0	3	COMSYSTEMS, COMSYSTEMSL
MODCODINGL	Modulation and Coding Techniques Laboratory	0	3	1	COMSYSTEMS, COMSYSTEMSL, Co-req: MODCODING
INFOCOMTECH1	Routing and Switching Essentials	1	3	2	COMFUN2
<b>TOTAL</b>		<b>19</b>	<b>15</b>	<b>24</b>	

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**THIRD YEAR, SECOND SEMESTER**

3FIL2	Filipino sa Iba't Ibang Disiplina	3	0	3	3FIL1
9STS	Science, Technology and Society	3	0	3	None
TECHENTREP	Technopreneurship	3	0	3	ENGGECON
FEEDBACK	Feedback and Control Systems	3	0	3	ADVENGMATH, CIRCUITS2, CIRCUITS2L
FEEDBACKL	Feedback and Control Systems Laboratory	0	3	1	ADVENGMATH, CIRCUITS2, CIRCUITS2L, Co-req: FEEDBACK
MICROSAD	Microprocessor and Microcontroller Systems and Design	3	0	3	LOGICSWITCH, LOGICSWITCHL
MICROSADL	Microprocessor and Microcontroller Systems and Design Laboratory	0	3	1	LOGICSWITCH, LOGICSWITCHL, Co-req: MICROSAD
DATACOMS	Data Communications	3	0	3	MODCODING, MODCODINGL
DATACOMSL	Data Communications Laboratory	0	3	1	MODCODING, MODCODINGL, Co-req: DATACOMS
INFOCOMTECH2	Advanced Routing and Switching	1	3	2	INFOCOMTECH1
<b>TOTAL</b>		<b>19</b>	<b>12</b>	<b>23</b>	

**THIRD YEAR, SUMMER TERM**

ECEONJOB	ECE On-the-Job Training (240 hours)			3	3rd Year Standing, Permission of Program Chair or School Dean
<b>TOTAL</b>				<b>3</b>	

**FOURTH YEAR, FIRST SEMESTER**

4ETHICS	Ethics	3	0	3	None
4READPHILHIS	Readings in Philippine History	3	0	3	None
ENVISCIENG	Environmental Science and Engineering	3	0	3	CHEMENG, CHEMENGL
TRANSMEDIA	Transmission Media and Antenna System and Design	3	0	3	MODCODING, MODCODINGL
TRANSMEDIAL	Transmission Media and Antenna System and Design Laboratory	0	3	1	MODCODING, MODCODINGL, Co-req: TRANSMEDIA
ECEDESIGN1	Design 1 / Capstone Project 1	0	3	1	4th Year Standing
RMETHODS	Methods of Research	3	0	3	4th Year Standing
INFOCOMTECH3	Scaling and Connecting Networks	1	3	2	INFOCOMTECH2
ECE ELECTIVE 1	ECE Professional Elective 1	3	3	4	
<b>TOTAL</b>		<b>19</b>	<b>12</b>	<b>23</b>	

**FOURTH YEAR, SECOND SEMESTER**

1LIT12	Great Books	3	0	3	None
4ARTAPP	Art Appreciation	3	0	3	None
4RIZAL	Life and Works of Rizal	3	0	3	None
ENGGMGMT	Engineering Management	3	0	3	3rd Year Standing
ECEDESIGN2	Design 2 / Capstone Project 2	0	3	1	ECEDESIGN1
ECELAWSCCESS	ECE Laws, Contracts, Ethics, Standards and Safety	3	0	3	4th Year Standing
ECESEMINARS	Seminars / Colloquium	0	3	1	4th Year Standing
INFOCOMTECH4	Cybersecurity Essentials	1	3	2	INFOCOMTECH3
ECE ELECTIVE 2	ECE Professional Elective 2	3	3	4	
<b>TOTAL</b>		<b>19</b>	<b>12</b>	<b>23</b>	

**PROGRAM TOTAL**

**195**

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**IMPORTANT:** Registration in any subject is allowed only upon passing the prerequisite(s) of the said subject, if any. A subject enrolled in violation of this rule will not be given any credit regardless of the grade obtained.

**NOTES:** The nth Year Standing means that the student must have completed at least 75% of the load requirements of the previous year level.

This curriculum is based on requirements specified by Commission on Higher Education (CHED) Memorandum Order No. 101, series of 2017: Policies, Standards and Guidelines for the Bachelor of Science in Electronics Engineering Program.

**PROFESSIONAL ELECTIVES IN SPECIALIZED FIELDS (ECE ELECTIVE 1 AND 2)**

COURSE CODE	COURSE TITLE	LEC HRS	LAB HRS	CREDIT UNITS	PREREQUISITE(S)/ CO-REQUISITE(S)
<b>A. TELECOMMUNICATIONS</b>					
ADVCOMSAD/L	Advanced Communication System and Design (Wireless)	3	3	4	TRANSMEDIA/L
ADVNETWORK/L	Advanced Networking	3	3	4	TRANSMEDIA/L
Sub Total		<b>6</b>	<b>6</b>	<b>8</b>	
<b>B. MICROELECTRONICS</b>					
ICDESANLOG/L	Analog IC Design	3	3	4	ESYSTEMS/L
ICDESDIGIT/L	Digital IC Design	3	3	4	ESYSTEMS/L
Sub Total		<b>6</b>	<b>6</b>	<b>8</b>	
<b>C. POWER ELECTRONICS</b>					
ADVPOWER/L	Advanced Power Supply Systems	3	3	4	ECKTSAD/L
RNWENERSYS/L	Renewable Energy Systems	3	3	4	CIRCUITS2/L
Sub Total		<b>6</b>	<b>6</b>	<b>8</b>	
<b>D. BIOTECH/BIOMEDICAL ELECTRONICS</b>					
BIOMEDENGG/L	Fundamentals of Biomedical Engineering	3	3	4	EPHYSICS2/L
MEDIMAGE/L	Medical Imaging	3	3	4	EPHYSICS2/L
Sub Total		<b>6</b>	<b>6</b>	<b>8</b>	
<b>E. INSTRUMENTATION AND CONTROL</b>					
ADVINSTCON/L	Advanced Instrumentation and Control Systems	3	3	4	FEEDBACK/L
ROBOTECH/L	Robotics Technology	3	3	4	ESYSTEMS/L
Sub Total		<b>6</b>	<b>6</b>	<b>8</b>	
<b>F. BUILDING INFORMATION AND COMMUNICATIONS TECHNOLOGY INFRASTRUCTURE</b>					
ICTINFRA/L	ICT Infrastructure	3	3	4	
EANCILLSYS/L	Electronics Ancillary System	3	3	4	ESYSTEMS/L
Sub Total		<b>6</b>	<b>6</b>	<b>8</b>	
<b>G. COMPUTER</b>					
COMSYSARC/L	Computer Systems Architecture	3	3	4	COMFUN2
OSADVPLANG/L	Operating Systems and Advanced Programming Languages	3	3	4	COMFUN2
Sub Total		<b>6</b>	<b>6</b>	<b>8</b>	
<b>H. BROADCASTING</b>					
BCPRODENG/L	Broadcast Production Engineering	3	3	4	TRANSMEDIA/L
BCTRANSDIS/L	Broadcast Transmission and Distribution	3	3	4	BCPRODENG/L
Sub Total		<b>6</b>	<b>6</b>	<b>8</b>	
<b>I. EMERGING TECHNOLOGIES</b>					
To be developed by the School of Engineering and Architecture.					