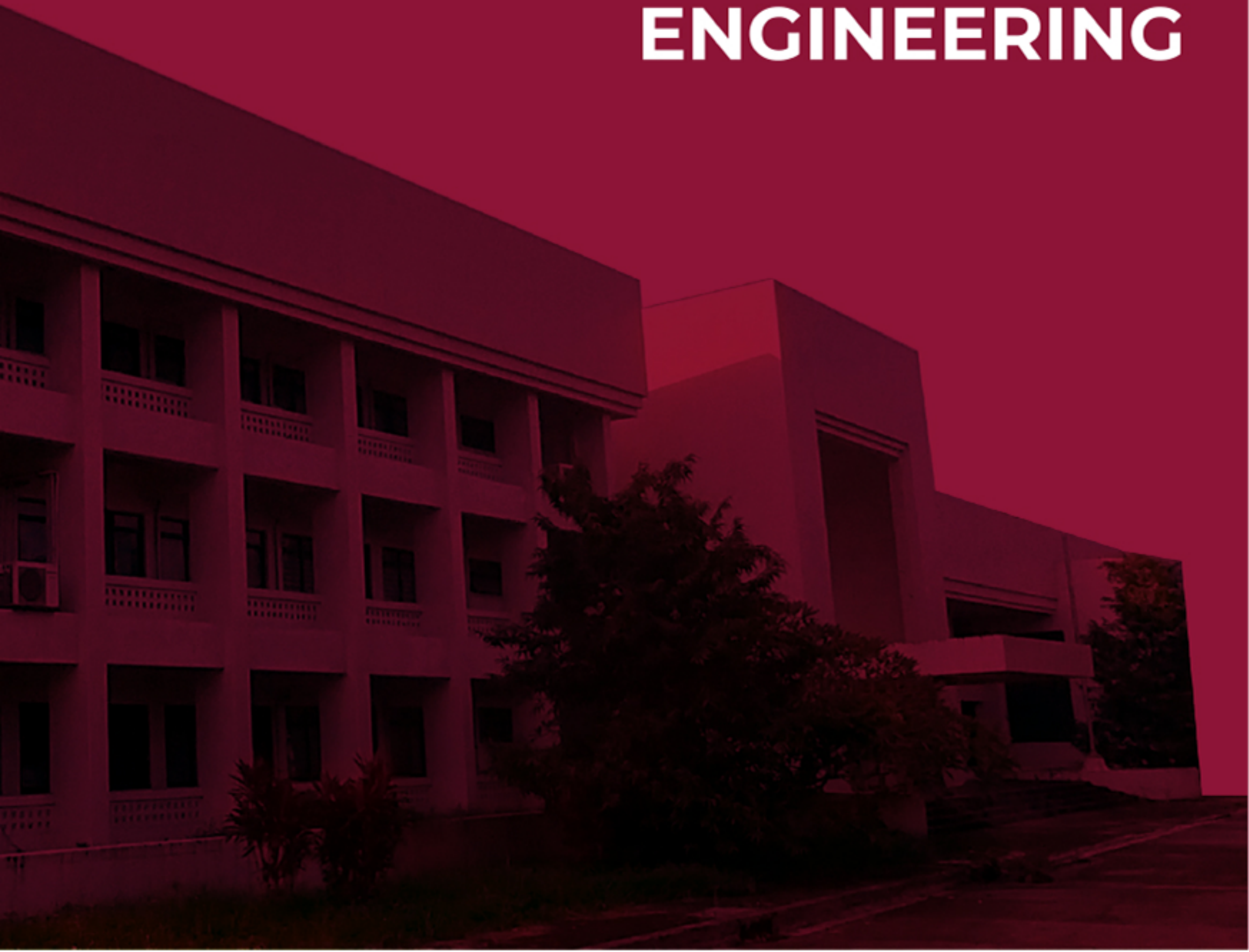




DEPARTMENT OF  
**ELECTRICAL  
ENGINEERING**



## History

The Department of Electrical Engineering has more than a decade-long record of excellence. The Bachelor of Science in Electrical Engineering (BSEE) Program was approved by the UP Board of Regents (BOR) on September 26, 1996. On April 17, 1997, the BOR approved the establishment of the UPLB Department of Electrical Engineering (DEE) with Assoc. Prof. Maximino G. Villanueva as the first Department Chair. Shiftees from other degree programs in UPLB were the first few students until the program was included in the UP College Admission Test Application form in 1998. In 2001, the department produced its first graduate.

The department was initially housed at the CEAT Building B then later was relocated at the Instrumentation Section Building's current location. On October 19, 1998, the department's location was once again transferred to the Powerhouse, now known as the Industrial Engineering Building. Finally, the department transferred to its permanent location in 2003. The Electrical Engineering Building houses the CEAT Administration Building, Office of the College Secretary and the College Library.

## Vision

Our vision is to become a Center of Excellence in the field of Electrical Engineering

## Mission

To contribute to the progress of Science and Engineering by pursuing high-quality and relevant research and academic activities

## Specializations

### Power Engineering

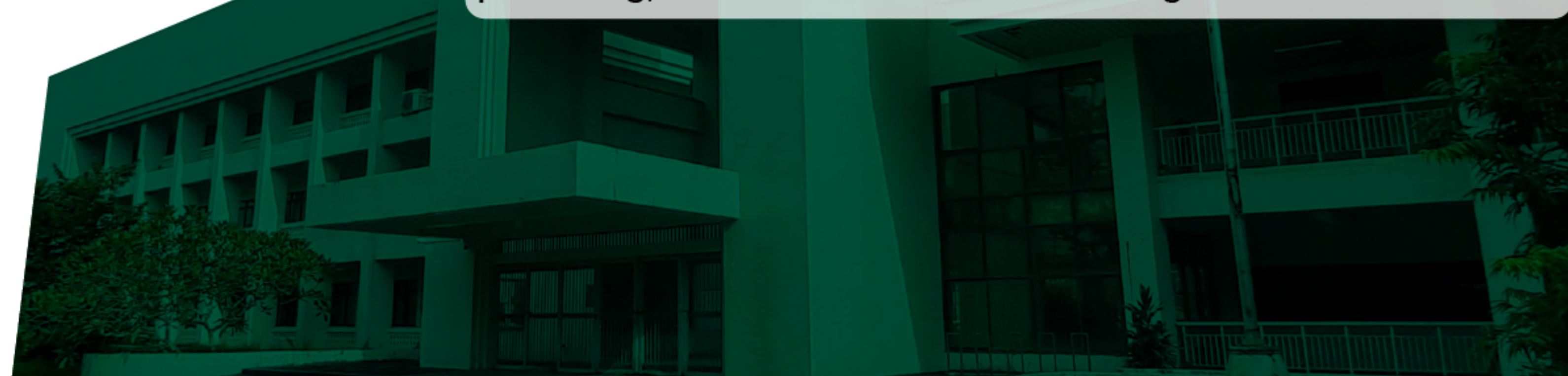
The Power Engineering specialization of the BSEE Program of the Department has been responsible for training and educating graduates in electric power engineering courses. The number of students attracted to this specialization has been consistent with employment opportunities both locally and internationally. In addition to their basic knowledge in electrical engineering, students are armed with strong analytical skills in power systems analysis, power distribution engineering, and power system protection.

### Electronics Engineering

This specialization aims to train and provide students with a comprehensive knowledge and practical skills in the fields of electronics and communications. Students enrolled in this specialization will have knowledge in the following fields: electronic circuits, instrumentation and industrial electronics, power electronics, and communication systems.

### Computer Engineering

Computer engineers are responsible in realizing tomorrow's technologies from innovations in computer hardware and software to new designs for stand-alone and integrated systems. The curriculum is designed to meet the demand for engineers with strong design skills in hardware and integrated systems implementations. Computer engineering graduates have well-established background in digital systems, robotics, signal processing, and hardware and software design.



# Curriculum

## FIRST YEAR First Semester

Course Code	Course Title	Unit
MATH 27	Analytic Geometry and Calculus II	3
PHYS 71	University Physics I	4
PHYS 71.1	University Physics I Laboratory	1
EE 30	Introduction to Electrical Engineering	1
PI 10	Life and Works of Jose Rizal	3
ARTS 1	Critical Perspectives in the Arts	3
ETHICS 1	Ethics and Moral Reasoning	3
HK 11	Wellness and Basic Injury Management	(2)
NSTP 1	National Service Training Program	(3)
<b>Total</b>		<b>18</b>

## Second Semester

Course Code	Course Title	Unit
MATH 28	Analytic Geometry and Calculus III	3
PHYS 72	University Physics II	4
PHYS 72.1	University Physics II Laboratory	1
ENSC 10.1	Engineering Graphics Laboratory	2
ENSC 11	Statics of Rigid Bodies	3
GE Elective	Elective	3
GE Elective	Elective	3
HK 12	Human Kinetics Activities	(2)
NSTP 2	National Service Training Program	(3)
<b>Total</b>		<b>19</b>

## SECOND YEAR First Semester

Course Code	Course Title	Unit
EE 40	Fundamentals of Electrical Engineering I	4
EE 45	Fundamentals of Engineering Electromagnetics	3
ENSC 12	Dynamics of Rigid Bodies	3
ENSC 14a	Engineering Thermodynamics and Heat Transfer	5
ENSC 21	Mathematical Methods in Engineering	3
STS 1	Science, Technology, and Society	3
HK 12/13	Human / Advanced Human Kinetics Activities	(2)
<b>Total</b>		<b>21</b>

## Second Semester

Course Code	Course Title	Unit
EE 50	Fundamentals of Electrical Engineering II	4
EE 51	Electromechanical Energy Conversion for DC	3
EE 55	Semiconductor Devices	3
ENSC 26	Computer Applications in Engineering	3
HIST/KAS1	Philippine History / Kasaysayan ng Pilipinas	3
GE Elective	Elective	3
HK 12/13	Human / Advanced Human Kinetics Activities	(2)
<b>Total</b>		<b>19</b>

## MIDYEAR

Course Code	Course Title	Unit
EE 198	Internship	3
<b>Total</b>		<b>3</b>

## THIRD YEAR First Semester

Course Code	Course Title	Unit
EE 60	Signals and Systems	3
EE 65	Electronic Circuits	4
EE 61	Electromechanical Energy Conversion for AC	4
EE 62	Principles of Power Systems	3
EE 66	Signals and Noise in Electrical Engineering Networks	3
ENG 10	Writing of Scientific Papers	3
<b>Total</b>		<b>20</b>

## Second Semester

Course Code	Course Title	Unit
EE 70	Instrumentation Engineering	4
EE 75	Digital Electronics	4
EE 71	Analysis of Power Systems	3
EE 79	Electrical Engineering Law, Ethics, and Contracts	1
FPPS 183	Engineering Economic Analysis	3
IE 184	Project Development and Management	3
EE 199	Undergraduate Seminar	1
<b>Total</b>		<b>19</b>

## FOURTH YEAR First Semester

Course Code	Course Title	Unit
EE 85	Industrial Electronics	3
EE 80	Control Systems Analysis	3
EE 86	Electronic Communication Systems I	3
EE 81	Maintenance of Electrical Equipment and Devices	3
COMM 10	Critical Perspectives in Communication	3
EE 200	Thesis or Innovationeering or Engineering Industry Research	3
EE 200b		
EE 200c		
SPEC	Specialization	3
<b>Total</b>		<b>21</b>

## Second Semester

Course Code	Course Title	Unit
EE 200	Thesis or Innovationeering or Engineering Industry Research	3
EE 200b		
EE 200c		
SPEC	Specialization Course	3
SPEC	Specialization Course	3
Elective	Elective	3
Elective	Elective	3
EE 91	Electrical System Design, Planning, and Estimation	4
<b>Total</b>		<b>19</b>

## Career Opportunities

### Government Service

Department of Energy  
 Department of Science and Technology  
 Energy Regulatory Commission  
 National Economic and Development  
 Authority  
 National Grid Corporation of the  
 Philippines

### Power and Energy Sector

Aboitiz Power  
 Meralco  
 Electric Cooperatives  
 IEMOP  
 SMC Global Power Holdings Corp.  
 Petron Corporation  
 LONGi Solar  
 GNPowder  
 PetroGreen Energy Corp.  
 First Gen Corporation  
 AC Energy

### Design and Construction

Fluor Daniel Incs.  
 Hyder Consulting  
 First Balfour  
 Black & White Engineering  
 Arcadis

### Electrical and Electronic Components Design, Manufacturing, and Testing

Analog Devices Inc.  
 Maxim Integrated  
 Integrated Micro-Electronics, Inc.  
 ROHM LSI Design Philippines  
 Emerson Automation Solutions  
 Golden Ratio Electro-Automation  
 Systems Inc.  
 Innovative Controls, Inc.  
 Artesyn Embedded Power  
 Dyson  
 Schneider Electric

### Telecommunications

Smart Communications  
 Globe Telecom

## Board Exam Performance

Date	Passing Rate	Topnotcher(s)	Date	Passing Rate	Topnotcher(s)
September 2001	100%	13th	April 2011	100%	8th
April 2002	100%	11th & 13th	September 2011	100%	9th
September 2002	100%	10th	May 2012	100%	3rd, 6th, & 9th
April 2003	100%	12th & 13th	September 2012	100%	
September 2003	100%	7th, 12th, 14th, & 20th (2)	April 2013	100%	5th & 9th
April 2004	100%	11th & 18th	September 2013	100%	
September 2004	94.74%		February 2014	100%	7th & 10th
April 2005	100%	18th	September 2014	100%	
September 2005	100%	9th, 14th, & 18th	April 2015	100%	7th
April 2006	100%	1st, 2nd, 6th, 9th, & 10th	September 2015	100%	
September 2006	100%	4th	April 2016	100%	7th, 8th, & 9th
April 2007	100%	2nd, 4th, 6th, 9th, & 10th	September 2016	100%	
September 2007	100%	1st	April 2017	100%	2nd, 3rd, 5th, 7th, 8th, & 9th
May 2008	100%	6th	September 2017	100%	7th
September 2008	100%		April 2018	100%	1st, 2nd, 3rd, 5th, 6th, 8th
May 2009	92.86%		September 2018	100%	
September 2009	93.75%	10th	April 2019	100%	1st, 3rd, 4th, 5th, 6th, & 9th
May 2010	100%	2nd, 4th, & 10th	September 2019	100%	
September 2010	100%	1st & 3rd	September 2021	100%	7th, 8th (2), 10th



100% Passing Rate: **35/38\*** Topnotchers: **72\***



Department of Electrical Engineering

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  uplbdee



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  UPLBOfficial





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Agro-Industrial Technology

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