Curriculum Plan for the Electrical Engineering and Automation Major

Note: CP = Credits; L = Theory Courses; P = Practical Courses; S1−S8 = Semester 1−8; In principle, each theory course is equivalent to 1 Chinese credit.
Equivalent to 1 ETCS credit; the internship/practical training course is converted from 1 Chinese credit to 2 ETCS credits.

I. Basic Sciences and Humanities Literacy Module

course title	the type of course	credit	ECTS credit	Credit Hours	Self-study hours	S1	S2	S3	S4	S5	S6	S7	S8
Ideological and Moral Education and Rule of Law	L&P	3	4	48	32	3	-	-	-	-	-	-	-
Essentials of Chinese Modern History	L&P	3	4	48	32	-	3	-	-	-	-	-	-
The Basic Principles of Marxism	L&P	3	4	48	32	-	-	3	-	-	-	-	-
An Introduction to Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era	L&P	3	4	48	32	3	-	-	-	-	-	-	-
An Introduction to Mao Zedong Thought and the Theoretical System of Socialism with Chinese Characteristics	L&P	3	4	48	32	-	-	-	3	-	-	-	-
situation and policy	L&P	2	3	64	48	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
college sports	L	4	4	128	0	1	1	1	1	-	-	-	-
Mental Health Education for College Students	L	2	2	32	24	-	2	-	-	-	-	-	-
Military Theory and Military Training	L&P	4	5	64	48	4	-	-	-	-	-	-	-
College Chinese Language and Literature	L	2	2	32	24	-	-	2	-	-	-	-	-
Public art	L	2	2	32	24	-	-	-	2	-	-	-	-
Total		31	38	592	328								

II. Foreign Language and International Exchange Module

course title	the type of course	credit	ECTS credit	Credit Hours	Self-study hours	S1	S2	S3	S4	S5	S6	S7	S8
College English (1)	L	3	3	48	32	3	-	-	-	-	-	-	-
College English (2)	L	3	3	48	32	-	3	-	-	-	-	-	-
College English (3)	L	3	3	48	32	-	-	3	-	-	-	-	-
College English (4)	L	3	3	48	32	-	-	-	3	-	-	-	-
English for Electrical Engineering Majors	L	2	2	32	24	-	-	-	-	2	-	-	-
Total		14	14	224	152								

III. Communication, Collaboration, Innovation, and Entrepreneurship Module

course title	the type of course	credit	ECTS credit	Credit Hours	Self-study hours	S1	S2	S3	S4	S5	S6	S7	S8
Entrepreneurship and Innovation Education versus Career Planning	L	2.5	2.5	32	24	-	1	0.5	0.5	0.5	-	-	-
employment guidance	L	1	1	16	12	-	-	-	-	-	-	1	-
Literature Search and Scientific Paper Writing	P	1	2	16	12	-	0.5	-	-	-	-	-	-
second classroom	P	2	4	32	24	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Entrepreneurship and Innovation Elective Courses	L	2	4	32	24	-	-	-	-	-	1	1	-
Total		8.5	13.5	128	96								

IV. Basic Modules of Electrical Engineering

course title	the type of course	credit	ECTS credit	Credit Hours	Self-study hours	S1	S2	S3	S4	S5	S6	S7	S8
Advanced Mathematics (1)	L	6	6	96	64	6	-	-	-	-	-	-	-
Advanced Mathematics (2)	L	4	4	64	42	-	4	-	-	-	-	-	-
linear algebra	L	2	2	32	22	-	2	-	-	-	-	-	-
Probability Theory and Mathematical	L	2	2	32	22	-	-	2	-	-	-	-	-

Statistics													
Complex Analysis and Integral Transforms	L	2	2	32	22	-	-	2	-	-	-	-	-
college physics	L	4	4	64	42	-	4	-	-	-	-	-	-
University Physics Laboratory	P	1	2	16	12	-	1	-	-	-	-	-	-
Fundamentals of Engineering Drawing	L	3	3	48	32	3	-	-	-	-	-	-	-
C Programming Language	L&P	3	4.5	48	32	-	-	3	-	-	-	-	-
Electromagnetic Field Theory for Engineering Applications	L	2	2	32	22	-	-	2	-	-	-	-	-
discrete mathematics	L	2	2	32	22	-	-	2	-	-	-	-	-
Fundamentals of Information Science	L&P	2	3	48	32	2	-	-	-	-	-	-	-
Total		33	36.5	544	366								

V. Core Modules of the Electrical Engineering Major

course title	the type of course	credit	ECTS credit	Credit Hours	Self-study hours	S1	S2	S3	S4	S5	S6	S7	S8
Circuit Principles (1)	L&P	4.5	5	72	48	-	4.5	-	-	-	-	-	-
Analog Electronics Technology	L&P	3.5	4	56	38	-	-	3.5	-	-	-	-	-
Digital Electronics Technology	L&P	3.5	4	56	38	-	-	-	3.5	-	-	-	-
Automatic Control Principles	L&P	3	3.5	48	32	-	-	-	-	3	-	-	-
power electronic technology	L&P	3	3.5	48	32	-	-	-	3	-	-	-	-
electromechanics	L&P	4.5	5	72	48	-	-	-	4.5	-	-	-	-
power system analysis	L&P	4.5	5	72	48	-	-	-	-	4.5	-	-	-
Electrical Systems of	L&P	3	3.5	48	32	-	-	-	-	3	-	-	-

Power Plants													
Electrical Control and PLC	L&P	4	4.5	64	42	-	-	-	-	-	4	-	-
Power System Relay Protection	L&P	4	4.5	64	42	-	-	-	-	-	4	-	-
high voltage technique	L&P	2	2.5	32	22	-	-	-	-	-	2	-	-
power system automation	L&P	3	3.5	48	32	-	-	-	-	-	3	-	-
Detection and Conversion Technology	L&P	2.5	3	40	26	-	-	-	-	2.5	-	-	-
Microcontroller Principles and Applications	L&P	3	5	48	32	-	-	-	3	-	-	-	-
Introduction to Electrical Engineering	L	1	1	16	12	1	-	-	-	-	-	-	-
Total		49	57.5	784	524								

VI. Professional Development and Cutting-edge Technology Module

course title	the type of course	credit	ECTS credit	Credit Hours	Self-study hours	S1	S2	S3	S4	S5	S6	S7	S8
Smart Grid Technology	L&P	2	2.5	32	24	-	-	-	-	-	2	-	-
New Energy Power Generation Technology	L	2	2	32	24	-	-	-	-	-	2	-	-
High-voltage direct current (HVDC) transmission technology	L	2	2	32	24	-	-	-	-	-	2	-	-
Online Monitoring and Fault Diagnosis of Electrical Equipment	L	2	2	32	24	-	-	-	-	-	2	-	-
AC/DC Speed Control System	L&P	3	4	48	32	-	-	-	-	-	3	-	-
industrial process control	L	3	3	48	32	-	-	-	-	-	3	-	-
Fundamentals of Industrial Economics and Management	L	2	2	32	24	-	-	2	-	-	-	-	-

Circuit Principles (2)	L	3	3	48	32	-	-	-	-	-	-	3	-
Application of Artificial Intelligence in Power Systems	L	2	2	32	24	-	-	-	-	-	2	-	-
Note: Elective courses must be completed for at least 5 credits.													

VII. Professional Practice and Engineering Training Module

course title	the type of course	credit	ECTS credit	Credit Hours	Self-study hours	S1	S2	S3	S4	S5	S6	S7	S8
Engineering Training	P	1	2	32	24	1	-	-	-	-	-	-	-
Professional Orientation Internship	P	0.5	1	16	12	-	0.5	-	-	-	-	-	-
Electrical Equipment Assembly and Fabrication Practical Training	P	0.5	1	16	12	-	0.5	-	-	-	-	-	-
C Language Course Project	P	1	2	32	24	-	-	1	-	-	-	-	-
Mathematical Modeling and MATLAB Simulation	P	0.5	1	16	12	-	-	0.5	-	-	-	-	-
Integrated Electronic Technology Course Design	P	1	2	32	24	-	-	-	1	-	-	-	-
Integrated Design of Control System Modeling and Simulation	P	1	2	32	24	-	-	-	-	1	-	-	-
Electrical Control and PLC Course Design	P	1	2	32	24	-	-	-	-	-	1	-	-
Configuration Control	P	0.5	1	16	12	-	-	-	-	-	0.5	-	-

Technology Practical Training													
Integrated Design of Electrical Engineering Drawing	P	2	2	64	42	-	-	-	-	-	-	2	-
Integrated Practical Training in Electrical Engineering	P	2	4	64	42	-	-	-	-	-	-	2	-
work	P	1	1.5	16	12	0.25	0.25	0.25	0.25	-	-	-	-
Socialist Core Values Theme-based Practice	P	1	2	16	12	0.25	0.25	0.25	0.25	-	-	-	-
Total		13	23.5	384	276								

VIII. Graduation Internship and Graduation Project Module

course title	**the type of course**	**credit**	**ECTS credit**	**Credit Hours**	**Self-study hours**	**S1**	**S2**	**S3**	**S4**	**S5**	**S6**	**S7**	**S8**
graduation field work	P	3	6	96	64	-	-	-	-	-	-	-	3
Graduation Design (Thesis)	L&P	6	12	192	128	-	-	-	-	-	-	-	6
Total		9	18	288	192								