

Bismarck State College

National Energy Center of Excellence

Electric Power Technology Educational Plan

The educational plan is a list of courses that students need to complete prior to obtaining their Associate in Applied Science Degree. Students are responsible to contact their advisor if they have any questions.

	Approx. Time to Complete Program	Total Credits Required	Electric Power General Credits Required	Electric Power Specialization Credits Required	General Ed. Credits Required
A.A.S. Degree	2 years	68	41	12	15
Certificate of Completion	1 1/2 years	57	41	12	4
Essentials Certificate	1 year	29	29	0	0

Note: The word "credits" in these titles equals semester credit hours.

Semester I:	Tech Credits	Completed
ELPW 101 Basic Computer Skills	3	
ELPW 111 Introduction to the Electrical Industry & Power Grid	3	
ENRT 103 Applied Math	3	
ENRT 106 DC Fundamentals	2	
ENRT 108 AC Fundamentals	3	
Total – 1st semester	14	
Semester II:	Tech Credits	Completed
ELPW 105 Electrical System Fundamentals	3	
ELPW 109 Electrical Industry Safety	3	
ELPW 110 Basic Print Reading	3	
ELPW 112 Electrical System Components	2	
ENRT 115 Industrial Composition	2	
Total – 2nd semester	13	
Semester III:	Tech Credits	Completed
ELPW 118 Industrial Communications	2	
ELPW 200 Advanced Print Reading	3	
ELPW 202 Advanced Industrial Safety	3	
ELPW 204 Advanced Electrical Systems	3	
ELPW 206 Electrical System Protection	3	
Total – 3rd semester	14	
Semester IV: - Choose one of four specializations	Tech Credits	Completed
1. Line Construction Specialization – offered fall semesters		
ELPW 250 Transformers	4	
ELPW 230 Underground Line Construction	4	
ELPW 210 Overhead Transmission & Distribution Line Construction	4	
2. Substation Specialization – offered spring semesters		
ELPW 251 Substation Construction and Maintenance	4	
ELPW 211 Substation Relays	4	
ELPW 231 Substation Operations	4	
3. System Design Specialization – offered spring semesters		
ELPW 208 Advanced Math	4	
ELPW 212 System Design Basics	3	

ELPW 232 System Design Analysis	3	
ELPW 252 Civil Design	2	
4. Metering Specialization – offered fall semesters		
ELPW 208 Advanced Math	4	
ELPW 213 Fundamentals of Metering	3	
ELPW 233 Single-Phase & Polyphase Metering	3	
ELPW 253 Advanced Metering Technology	2	
Total Technical Credits	53	
In addition to the energy courses, 15 general education credits are required for the AAS degree:		

General Education Online Classes for Associate in Applied Science degrees

Communications (6 credits)

ENGL 110	College Composition I (REQUIRED)	3 credits	
ENGL 120	College Composition II (ENGL 110 prerequisite)	3 credits	
ENGL 125	Intro to Professional Writing(ENGL 110 prerequisite)	3 credits	
COMM 110	Fund of Public Speaking	3 credits	

Arts and Humanities/Social and Behavioral Sciences (3 credits)

Art 110	Intro to Visual Arts	3 credits	
ENGL 278	Alternative Literature	3 credits	
HIST 104	United States Since 1877	3 credits	
HUMS 210	Integ Cultural Studies	3 credits	
MUSC 100	Music Appreciation	3 credits	
PHIL 101	Intro to Philosophy	3 credits	
PHIL 210	Ethics	3 credits	
CJ 201	Intro to Criminal Justice	3 credits	
ECON 201	Principles of Microeconomics	3 credits	
ECON 202	Principles of Macroeconomics	3 credits	
POLS 116	State and Local Government	3 credits	
PSYC 111	Intro to Psychology	3 credits	
SOC 110	Intro to Sociology	3 credits	
SOC 115	Social Problems	3 credits	
SOC 220	Family	3 credits	
SOC 235	Cultural Diversity	3 credits	
SOC 252	Criminology	3 credits	
SOC 275	Native American Studies	3 credits	
SWK 256	Develop of Social Welfare	3 credits	

Business, Math, Science and Technology (6 credits in any two areas of study)

For example, enroll in a math and an accounting course, but not two accounting courses or two math courses.

ACCT 200	Elements of Accounting I	3 credits	
ACCT 201	Elements of Accounting II	3 credits	
BIOL 111	Concepts of Biology/lab	3/1 credits	
BIOL 124	Environmental Science	3 credits	
BUSN 120	Fund of Business	3 credits	
BADM 202	Principles of Management	3 credits	
BADM 240	Sales	3 credits	
BADM 281	Organizational Behavior	3 credits	
BADM 282	Human Resource Mgmt	3 credits	
CSCI 101	Introduction to Computers	3 credits	
CSCI 122	Beginning/Visual Basic	3 credits	
CSCI 160	Computer Science I	3 credits	

MATH 102	Intermediate Algebra	3 credits	
MATH 103	College Algebra	4 credits	
MATH 210	Elementary Statistics	3 credits	
NUTR 240	Princ of Nutrition	3 credits	

Academic Skills Courses (ASC) Courses with numbers below 100 are considered college prep courses and do not apply toward graduation credits.

ASC 087	College Writing Prep	3 credits	
ASC 088	Composition Lab	1 credit	
ASC 089	Composition Lab	1 credit	

Graduation requirements for the following educational plans in Electric Power

Associate in Applied Science in Electric Power Technology (68 semester credit hours)

- Complete 41 semester credits of technical core courses and 12 semester hours in a specialization area of Electric Power Technology
- Complete 15 semester credits of general education
- Complete at least 15 semester credit hours from Bismarck State College
- Achieve a minimum 2.00 grade point average (C average) in
 - At least 60 semester credit hours less the semester credit hours given for CLEP examinations, military training and life experience
 - All of your Electric Power Technology courses
 - All credits from Bismarck State College

NOTE: CLEP examinations, military training and life experience credits are given a grade of satisfactory and do not change your grade point average.

- Clear all college obligations
- Submit an [Application for Graduation](#) at the beginning of the term which you expect to graduate.

Program Certificate (57 semester credit hours)

- Complete 41 semester credits of technical core courses and 12 semester hours in a specialization area of Electric Power Technology
- Complete 4 semester credits of general education from any two areas of study
- Complete at least 15 semester credit hours from Bismarck State College
- Achieve a minimum 2.00 grade point average (C average) in
 - All of your Electric Power Technology courses
 - All credits from Bismarck State College
- Clear all college obligations
- Submit an [Application for Graduation](#) at the beginning of the term which you expect to graduate.

Contact us:

1-800-852-5685 or 701-224-5651

www.bismarckstate.edu/energy