



# Electrical Transmission Systems Technology

Program Certificate  
Degree Plan 2015-2016

Prescribed Technical Program Total	51
General Education Total	4
<b>Total Degree Credits</b>	<b>55</b>

## Semester I

### Prescribed Technical Program Requirements

ETST	240	Power Industry Concepts	3
ETST	242	Applied Mathematics for System Operators	2
ENRT	106	DC Fundamentals	2
ENRT	108	AC Fundamentals	3
ETST	250	Electrical Generation Theory	4
ETST	254	System Elements I - Substations	3
<b>Total Credits</b>			<b>17</b>

## Semester II

### Prescribed Technical Program Requirements

ETST	256	System Elements II - Transformers	3
ETST	258	System Elements III - Protective Relaying	3
ETST	260	Electrical Diagram Interpretation	2
ETST	262	Power System Operations	3
ETST	266	Interconnected System Operations	3
ETST	268	Power Flow	3
<b>Total Credits</b>			<b>17</b>

## Semester III

### Prescribed Technical Program Requirements

ETST	270	System Operator Work Practices	3
ETST	272	Power System Safety	3
ETST	274	Communications & Control Technology	2
ETST	276	Power System Economics	3
ETST	278	Power System Emergency Concepts	3
ETST	280	Reliability Policies & Procedures	3
<b>Total Credits</b>			<b>17</b>

## General Education Requirements

(Select 4 credits of General Education in 2 areas of study.)

1.		4
2.		
<b>Total Credits</b>		<b>4</b>

# Program Certificate

## Degree Checklist

- Earned a minimum of 15 institutional credit (BSC only)
- Earned a minimum 2.00 institutional GPA (BSC only)
- Earned a minimum 2.00 cumulative GPA (BSC + Transfer)
- Earned a minimum 2.00 Prescribed Technical Program GPA

- Completed prescribed technical program requirements
- Cleared all college obligations
- Filed an Application for Degree

Programs containing 45 or more credits

- Earned a minimum of 4 credits of General Education from two areas of study

-Academic Skills Courses (ASC) do not apply toward graduation.

### Legend

(\*) Course not approved as GERTA

## General Education Requirements

Programs containing 45 or more credits must complete 4 credits of General Education from two areas of study.

Gr.	Cr.		Gr.	Cr.		Gr.	Cr.	
_____	3	* ACCT 200	_____	3	ENGL 110	_____	1	MUSC 145
_____	3	* ACCT 201	_____	3	ENGL 120	_____	1	MUSC 146
_____	3	ART 110	_____	3	ENGL 125	_____	3	* NUTR 240
_____	3	ART 122	_____	3	ENGL 211	_____	3	PHIL 101
_____	3	ART 124	_____	3	ENGL 221	_____	3	PHIL 210
_____	3	ART 130	_____	3	ENGL 222	_____	3	PHIL 220
_____	3	ART 210	_____	3	ENGL 233	_____	3	PHIL 250
_____	3	ART 211	_____	3	ENGL 236	_____	3	* PHIL 253
_____	3	ART 220	_____	3	ENGL 238	_____	3/1	PHYS 100
_____	3	ART 221	_____	3	ENGL 251	_____	3/1	PHYS 110
_____	3	ART 230	_____	3	ENGL 252	_____	3/1	PHYS 211
_____	3	ART 250	_____	3	ENGL 261	_____	3/1	PHYS 212
_____	3	ART 251	_____	3	ENGL 262	_____	4/1	PHYS 251
_____	2	ART 265	_____	3	ENGL 278	_____	4/1	PHYS 252
_____	2	ART 266	_____	3/1	GEOG 121	_____	2/1	PLSC 110
_____	3/1	ASTR 150	_____	3/1	GEOL 102	_____	3	POLS 115
_____	3	* BADM 202	_____	3/1	GEOL 105	_____	3	POLS 116
_____	3	* BADM 210	_____	3	GIS 105	_____	3	POLS 220
_____	3	* BADM 240	_____	3	* GIS 107	_____	3	PSYC 111
_____	3	* BADM 281	_____	3	HIST 101	_____	3	* PSYC 211
_____	3	* BADM 282	_____	3	HIST 102	_____	3	PSYC 250
_____	1	* BIOL 102	_____	3	HIST 103	_____	3	* PSYC 261
_____	3	BIOL 109	_____	3	HIST 104	_____	3	PSYC 270
_____	3/1	BIOL 111	_____	3	HIST 220	_____	3	RELS 120
_____	3/1	BIOL 115	_____	3	HIST 222	_____	3	RELS 201
_____	3	BIOL 124	_____	3	HIST 224	_____	3	RELS 203
_____	3/1	BIOL 126	_____	3	HIST 225	_____	3	RELS 220
_____	3/1	BIOL 150	_____	1-3	* HIST 243	_____	3	RELS 230
_____	3/1	BIOL 151	_____	3	HUMS 210	_____	3/1	SCNC 101
_____	3/1	BIOL 220	_____	1-4	HUMS 211	_____	3/1	SCNC 102
_____	3/1	BIOL 221	_____	2	HUMS 212	_____	3/1	SCNC 103
_____	3/1	BIOL 250	_____	4	MATH 103	_____	3/1	SCNC 103
_____	3/1	BIOL 251	_____	3	MATH 104	_____		
					College Composition I			Applied Music
					College Composition II			Applied Music - Major
					Introduction to Professional Writing			Principles of Nutrition
					Introduction to Creative Writing			Introduction to Philosophy
					Introduction to Drama			Ethics
					Introduction to Poetry			Introduction to Logic
					Fantasy & Science Fiction			Philosophy in Cinema
					Women & Literature			Environmental Ethics
					Children's Literature			Concepts of Physics/Lab
					British Literature I			Introduction to Astronomy/Lab
					British Literature II			College Physics I/Lab
					American Literature I			College Physics II/Lab
					American Literature II			University Physics I/Lab
					Alternative Literature			University Physics II/Lab
					Physical Geography/Lab			World Food Crops/Lab
					Historical Geology/Lab			American Government
					Physical Geology/Lab			State & Local Government
					Fundamentals of GIS			International Politics
					GIS Applications			Introduction to Psychology
					Western Civilization I			Introduction to Behavior Modification
					Western Civilization II			Developmental Psychology
					United States to 1877			Psychology of Adjustment
					United States since 1877			Abnormal Psychology
					North Dakota History			Religion in America
					History of the Western Frontier			Life & Letters of Paul
					American Studies I			World Religions
					American Studies II			Old Testament
					Historical Investigations			New Testament
					Integrated Cultural Studies			Physical Science I/Lab
					Integrated Cultural Excursion			Biology & Chemistry
					Integrated Cultural Enrichment			Physical Science II/Lab
					College Algebra			Physics & Geology
					Finite Math			Physical Science III/Lab
								Astronomy & Meteorology

_____ 3/1	BOT 170	Plant Form & Diversity/Lab	_____ 2	MATH 105	Trigonometry	_____ 3	SOC 110	Introduction to Sociology
_____ 3	* BUSN 120	Fundamentals of Business	_____ 4	MATH 107	Pre-Calculus	_____ 3	SOC 115	Social Problems
_____ 3/1	CHEM 110	Survey of Chemistry/Lab	_____ 3	* MATH 137	Applied Algebra	_____ 3	SOC 220	Family
_____ 3/1	CHEM 112	Introduction to Forensic Science/Lab	_____ 3	MATH 146	Applied Calculus I	_____ 3	SOC 221	Minority Relations
_____ 3/1	CHEM 114	Chemistry in Art/Lab	_____ 4	MATH 165	Calculus I	_____ 3	SOC 235	Cultural Diversity
_____ 4/1	CHEM 115	Introductory Chemistry/Lab	_____ 4	MATH 166	Calculus II	_____ 3	SOC 251	Gerontology
_____ 4/1	CHEM 116	Intro to Organic & Biochemistry/Lab	_____ 3	* MATH 208	Discrete Mathematics	_____ 3	SOC 252	Criminology
_____ 4/1	CHEM 121	General Chemistry I/Lab	_____ 3	MATH 210	Elementary Statistics	_____ 3	SOC 275	American Indian Studies
_____ 4/1	CHEM 122	General Chemistry II/Lab	_____ 4	* MATH 277	Math for Elementary Teachers I	_____ 2/1 *	SOIL 210	Introduction to Soil Science/Lab
_____ 4	* CIS 164	Networking Fundamentals	_____ 3/1	MICR 202	Introductory Microbiology/Lab	_____ 4	SPAN 101	First Year Spanish I
_____ 3	CJ 201	Introduction to Criminal Justice	_____ 3	MUSC 100	Music Appreciation	_____ 4	SPAN 102	First Year Spanish II
_____ 3	COMM 110	Fundamentals of Public Speaking	_____ 1	MUSC 117	Concert Choir	_____ 4	SPAN 201	Second Year Spanish I
_____ 3	COMM 211	Oral Interpretation	_____ 1	MUSC 118	Chamber Choir	_____ 4	SPAN 202	Second Year Spanish II
_____ 3	* COMM 212	Interpersonal Communications	_____ 1	MUSC 121	String Ensemble	_____ 3	SWK 256	Development of Social Welfare
_____ 3	CSCI 101	Introduction to Computers	_____ 1	MUSC 132	Wind Ensemble	_____ 3	THEA 110	Introduction to Theatre Arts
_____ 3	CSCI 122	Beginning Visual Basic	_____ 1	MUSC 133	Woodwind Ensemble I	_____ 3	THEA 161	Acting I
_____ 4	CSCI 160	Computer Science I	_____ 1	MUSC 134	Woodwind Ensemble II	_____ 3	THEA 261	Acting II
_____ 4	CSCI 161	Computer Science II	_____ 1	MUSC 135	Brass Ensemble I			
_____ 3	ECON 105	Elements of Economics	_____ 1	MUSC 136	Brass Ensemble II			
_____ 3	ECON 201	Principles of Microeconomics	_____ 1	MUSC 137	Jazz Ensemble			
_____ 3	ECON 202	Principles of Macroeconomics	_____ 1	* MUSC 138	Percussion Ensemble			

Transfer Course

Transfer Course

Transfer Course

## Academic Skills Courses (ASC)

The following Academic Skills Courses (ASC), as well as Math 102, are pre-college courses indicate the need for college preparation work before enrollment in college level courses. These courses will not carry honor points or earned credit and will not count toward the student's degree program.

_____ Gr.	_____ Cr.	_____ Gr.	_____ Cr.	_____ Gr.	_____ Cr.
_____ 2	ASC 082	Effective Reading	_____ 2	ASC 92	Algebra Prep II
_____ 3	ASC 087	College Writing Prep	_____ 2	ASC 93	Algebra Prep III
_____ 1	ASC 088	Composition Lab	_____ 3/1	ASC 098	Basic Biology/Lab
_____ 2	ASC 91	Algebra Prep I			

Advisor: \_\_\_\_\_

Office: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_