



Electrical Transmission Systems Technology

Program Certificate

Advising Worksheet* 2017-2018

| | |
|------------------------------------|-----------|
| Prescribed Technical Program Total | 51 |
| General Education Total | 4 |
| Total Degree Credits | 55 |

Semester I (Fall/Spring)

| Prescribed Technical Program Requirements | | | |
|---|-----|--|-----------|
| ETST | 240 | Power Industry Concepts | 3 |
| ETST | 242 | Applied Mathematics for System Operators | 2 |
| ENRT | 106 | DC Fundamentals (also offered in summer) | 2 |
| ENRT | 108 | AC Fundamentals (also offered in summer) | 3 |
| ETST | 260 | Electrical Diagram Interpretation | 2 |
| Total Credits | | | 12 |

Semester II (Fall/Spring)

| Prescribed Technical Program Requirements | | | |
|---|-----|---|-----------|
| ETST | 250 | Electrical Generation Theory | 4 |
| ETST | 254 | System Elements I - Substations | 3 |
| ETST | 256 | System Elements II - Transformers | 3 |
| ETST | 258 | System Elements III - Protective Relaying | 3 |
| Total Credits | | | 13 |

Semester III (Fall/Spring)

| Prescribed Technical Program Requirements | | | |
|---|-----|----------------------------------|-----------|
| ETST | 262 | Power System Operations | 3 |
| ETST | 266 | Interconnected System Operations | 3 |
| ETST | 268 | Power Flow | 3 |
| ETST | 270 | System Operator Work Practices | 3 |
| Total Credits | | | 12 |

Semester IV (Fall/Spring)

| Prescribed Technical Program Requirements | | | |
|---|-----|-------------------------------------|-----------|
| 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 |
| Total Credits | | | 14 |

General Education Requirements

Complete 4 credits of general education from any two areas of study.

| | | |
|----------------------|---|----------|
| 1. | 4 | |
| 2. | | |
| Total Credits | | 4 |

* The advising worksheet is unofficial and to be used for class planning purposes only. Please refer to the official catalog at <http://catalog.bismarckstate.edu> for the complete listing of the degree requirements.

Program Certificate - Programs Containing 45 or more Prescribed Technical Program Requirements 2017-2018 Catalog

Degree Checklist

- | | | | |
|--------------------------|--|--------------------------|--|
| <input type="checkbox"/> | Earned at least 15 semester hours of institutional credit from BSC | <input type="checkbox"/> | Completed prescribed technical program requirements |
| <input type="checkbox"/> | Minimum of 2.00 institutional GPA (BSC only) | <input type="checkbox"/> | Cleared all college obligations |
| <input type="checkbox"/> | Minimum of 2.00 cumulative GPA (BSC + Transfer) | <input type="checkbox"/> | Filed an Application for Degree in the Academic Records Office |
| <input type="checkbox"/> | Minimum of 2.00 GPA in a prescribed technical program | | |
| <input type="checkbox"/> | Earned a minimum of 4 semester hours of general education credit from two areas of study | | |

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 137 |
| | | Elements of Accounting I | | | College Composition I | | | Jazz Ensemble |
| 3 | * | ACCT 201 | 3 | | ENGL 120 | 1 | * | MUSC 138 |
| | | Elements of Accounting II | | | College Composition II | | | Percussion Ensemble |
| 3 | | ART 110 | 3 | | ENGL 125 | 1 | | MUSC 145 |
| | | Introduction to the Visual Arts | | | Introduction to Professional Writing | | | Applied Music |
| 3 | | ART 122 | 3 | | ENGL 211 | 1 | | MUSC 146 |
| | | Two-Dimensional Design | | | Introduction to Creative Writing | | | Applied Music - Major |
| 3 | | ART 124 | 3 | | ENGL 221 | 3 | * | NUTR 240 |
| | | Three-Dimensional Design | | | Introduction to Drama | | | Principles of Nutrition |
| 3 | | ART 130 | 3 | | ENGL 222 | 3 | | PHIL 101 |
| | | Drawing I | | | Introduction to Poetry | | | Introduction to Philosophy |
| 3 | | ART 210 | 3 | | ENGL 233 | 3 | | PHIL 210 |
| | | Art History I | | | Fantasy and Science Fiction | | | Ethics |
| 3 | | ART 211 | 3 | | ENGL 236 | 3 | | PHIL 220 |
| | | Art History II | | | Women and Literature | | | Introduction to Logic |
| 3 | | ART 220 | 3 | | ENGL 238 | 3 | | PHIL 250 |
| | | Painting I | | | Children's Literature | | | Philosophy in Cinema |
| 3 | | ART 221 | 3 | | ENGL 251 | 3 | | PHIL 253 |
| | | Painting II | | | British Literature I | | | Environmental Ethics |
| 3 | | ART 230 | 3 | | ENGL 252 | 3/1 | | PHYS 100 |
| | | Drawing II | | | British Literature II | | | Concepts of Physics/Lab |
| 3 | | ART 250 | 3 | | ENGL 261 | 3/1 | | PHYS 110 |
| | | Ceramics I | | | American Literature I | | | Introductory Astronomy/Lab |
| 3 | | ART 251 | 3 | | ENGL 262 | 3/1 | | PHYS 211 |
| | | Ceramics II | | | American Literature II | | | College Physics I/Lab |
| 2 | | ART 265 | 3 | | ENGL 278 | 3/1 | | PHYS 212 |
| | | Sculpture I | | | Alternative Literature | | | College Physics II/Lab |
| 2 | | ART 266 | 3/1 | | GEOG 121 | 4/1 | | PHYS 251 |
| | | Sculpture II | | | Physical Geography/Lab | | | University Physics I/Lab |
| 3/1 | | ASTR 150 | 3 | | GEOG 161 | 4/1 | | PHYS 252 |
| | | Meteorology/Lab | | | World Regional Geography | | | University Physics II/Lab |
| 3 | * | BADM 202 | 3/1 | | GEOL 102 | 2/1 | | PLSC 110 |
| | | Principles of Management | | | Historical Geology/Lab | | | World Food Crops/Lab |
| 3 | * | BADM 210 | 3/1 | | GEOL 105 | 3 | | POLS 115 |
| | | Advertising I | | | Physical Geology/Lab | | | American Government |
| 3 | * | BADM 240 | 3 | | GIS 105 | 3 | | POLS 116 |
| | | Sales | | | Fundamentals of GIS | | | State and Local Government |
| 3 | * | BADM 281 | 3 | * | GIS 107 | 3 | | POLS 220 |
| | | Organizational Behavior | | | GIS Applications | | | International Politics |
| 3 | * | BADM 282 | 3 | | HIST 101 | 3 | | PSYC 111 |
| | | Human Resource Management | | | Western Civilization I | | | Introduction to Psychology |
| 1 | * | BIOL 102 | 3 | | HIST 102 | 3 | * | PSYC 211 |
| | | Introduction to Aquarium Keeping | | | Western Civilization II | | | Introduction to Behavior Modification |
| 3 | | BIOL 109 | 3 | | HIST 103 | 3 | | PSYC 250 |
| | | The Living World | | | United States to 1877 | | | Developmental Psychology |
| 3/1 | | BIOL 111 | 3 | | HIST 104 | 3 | * | PSYC 261 |
| | | Concepts of Biology/Lab | | | United States since 1877 | | | Psychology of Adjustment |
| 3/1 | | BIOL 115 | 3 | | HIST 211 | 3 | | PSYC 270 |
| | | Human Structure and Function/Lab | | | World Civilizations since 1500 | | | Abnormal Psychology |
| 3 | | BIOL 124 | 3 | | HIST 212 | 3 | | RELS 120 |
| | | Environmental Science | | | World Civilizations since 1500 | | | Religion in America |
| 3/1 | | BIOL 125 | 3 | | HIST 220 | 3 | | RELS 201 |
| | | Introduction to Ecology/Lab | | | North Dakota History | | | Life and Letters of Paul |
| 3/1 | | BIOL 126 | 3 | | HIST 222 | 3 | | RELS 203 |
| | | Human Biology/Lab | | | History of the Western Frontier | | | World Religions |
| 3/1 | | BIOL 150 | 3 | | HIST 224 | 3 | | RELS 220 |
| | | General Biology I/Lab | | | American Studies I | | | Old Testament |
| 3/1 | | BIOL 151 | 3 | | HIST 225 | 3 | | RELS 230 |
| | | General Biology II/Lab | | | American Studies II | | | New Testament |
| 3/1 | | BIOL 220 | 1-3 | * | HIST 243 | 3/1 | | SCNC 101 |
| | | Anatomy and Physiology I/Lab | | | Historical Investigations | | | Physical Science I/Lab |
| 3/1 | | BIOL 221 | 3 | | HUMS 210 | | | (Biology & Chemistry) |
| | | Anatomy and Physiology II/Lab | | | Integrated Cultural Studies | | | Physical Science II/Lab |
| 3/1 | | BIOL 250 | 1-4 | | HUMS 211 | 3/1 | | (Physics & Geology) |
| | | Survey of Tropical Biology/Lab | | | Integrated Cultural Excursion | | | |
| 3/1 | | BOT 170 | 2 | | HUMS 212 | | | |
| | | Plant Form and Diversity/Lab | | | Integrated Cultural Enrichment | | | |

| | | | | | | | | | |
|-----|---|----------|---------------------------------------|-----|------------|--------------------------------|-------|----------|---|
| 3 | * | BUSN 120 | Fundamentals of Business | 4 | MATH 103 | College Algebra | 3/1 | SCNC 103 | Physical Science III/Lab (Astronomy & Meteorology) |
| 3/1 | | CHEM 110 | Survey of Chemistry/Lab | 3 | MATH 104 | Finite Mathematics | | | |
| 3/1 | | CHEM 112 | Introduction to Forensic Science/Lab | 2 | MATH 105 | Trigonometry | 3 | SOC 110 | Introduction to Sociology |
| 3/1 | | CHEM 114 | Chemistry in Art/Lab | 4 | MATH 107 | Pre-Calculus | 3 | SOC 115 | Social Problems |
| 4/1 | | CHEM 115 | Introductory Chemistry/Lab | 3 | * MATH 137 | Applied Algebra | 3 | SOC 220 | Family |
| 4/1 | | CHEM 116 | Intro to Organic and Biochemistry/Lab | 3 | MATH 146 | Applied Calculus I | 3 | SOC 221 | Minority Relations |
| 4/1 | | CHEM 121 | General Chemistry I/Lab | 4 | MATH 165 | Calculus I | 3 | SOC 235 | Cultural Diversity |
| 4/1 | | CHEM 122 | General Chemistry II/Lab | 4 | MATH 166 | Calculus II | 3 | SOC 251 | Gerontology |
| 4 | * | CIS 164 | Networking Fundamentals I | 3 | * MATH 208 | Discrete Mathematics | 3 | SOC 252 | Criminology |
| 3 | | CJ 201 | Introduction to Criminal Justice | 3 | MATH 210 | Elementary Statistics | 3 | SOC 275 | American Indian Studies |
| 3 | | COMM 110 | Fundamentals of Public Speaking | 4 | * MATH 277 | Math for Elementary Teachers I | 2/1 * | SOIL 210 | Introduction to Soil Science/Lab |
| 3 | | COMM 112 | Understanding Media and Social Change | 3/1 | MICR 202 | Introductory Microbiology/Lab | 4 | SPAN 101 | First Year Spanish I |
| 3 | | COMM 211 | Oral Interpretation | 3 | MUSC 100 | Music Appreciation | 4 | SPAN 102 | First Year Spanish II |
| 3 | | COMM 212 | Interpersonal Communications | 1 | MUSC 117 | Concert Choir | 4 | SPAN 201 | Second Year Spanish I |
| 3 | | CSCI 101 | Introduction to Computers | 1 | MUSC 118 | Chamber Choir | 4 | SPAN 202 | Second Year Spanish II |
| 3 | | CSCI 122 | Beginning Visual Basic | 1 | MUSC 121 | String Ensemble | 3 | SWK 256 | Development of Social Welfare |
| 4 | | CSCI 160 | Computer Science I | 1 | MUSC 132 | Wind Ensemble | 3 | THEA 110 | Introduction to Theatre Arts |
| 4 | | CSCI 161 | Computer Science II | 1 | MUSC 133 | Woodwind Ensemble I | 3 | THEA 161 | Acting I |
| 3 | | ECON 105 | Elements of Economics | 1 | MUSC 134 | Woodwind Ensemble II | 3 | THEA 261 | Acting II |
| 3 | | ECON 201 | Principles of Microeconomics | 1 | MUSC 135 | Brass Ensemble I | | | |
| 3 | | ECON 202 | Principles of Macroeconomics | 1 | MUSC 136 | Brass Ensemble II | | | |

Transfer Course

Transfer Course

Transfer Course

Academic Skills Courses (ASC)

The following Academic Skills Courses (ASC) are pre-college courses that indicate the need for college preparation work before enrollment in college level courses. These courses will not fulfill general education requirements, institutional credit requirements and cannot be included in the semester hours required for a Program Certificate.

| | | | | | | | |
|-----|-----|---------|----------------------|-----|-----|---------|--------------------------|
| Gr. | Cr. | | | Gr. | Cr. | | |
| 2 | | ASC 082 | Effective Reading | 2 | | ASC 94 | College Writing Prep I |
| 3 | | ASC 087 | College Writing Prep | 2 | | ASC 95 | College Writing Prep II |
| 1 | | ASC 088 | Composition Lab | 2 | | ASC 96 | College Writing Prep III |
| 2 | | ASC 91 | Algebra Prep I | 3/1 | | ASC 098 | Basic Biology/Lab |
| 2 | | ASC 92 | Algebra Prep II | | | | |
| 2 | | ASC 93 | Algebra Prep III | | | | |

Advisor: _____

Office: _____

Phone: _____

Email: _____

*This advising worksheet is unofficial and to be used for class planning purposes only. Please refer to the official catalog at <http://catalog.bismarckstate.edu/> for the complete listing of college degree requirements.