



# North Dakota State College of Science

800 Sixth St. N., Wahpeton, ND 58076-0002 • 1.800.342.4325

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OCTOBER 26, 2007

TO: Industry, Business and Labor Committee

FROM: Ivan Maas, chairman – NDSCS Electrical Technology Dept

Please find attached:

Coral - Electrical Technology curriculum(s)

White - Placement / employment data

THANK YOU for the opportunity to present to you!

Ivan Maas

NDSCS Electrical Technology Dept

[Ivan.Maas@ndscs.nodak.edu](mailto:Ivan.Maas@ndscs.nodak.edu)

701-671-2662



## Electrical Technology - Construction Option

Course			Sem Cr	Hrs/ Week	Contact Hours	
Dept	#	Title			Electrical	Total
ECAL	101	Electrical Fundamentals	5	5	80	80
ECAL	103	Electrical Code Study	4	4	64	64
ECAL	133	Basic Wiring	3	5	80	80
ECAL	137	Electrical Drafting	2	4	64	64
CIS	101	Computer Literacy	2	2		32
MATH	132	Technical Algebra I	2	2	32	32
MATH	136	Technical Trigonometry	2	2	32	32
<b>1<sup>st</sup> Semester Totals</b>			<b>20</b>	<b>24</b>	<b>352</b>	<b>384</b>

ECAL	102	Electrical Fundamentals	5	5	80	80
ECAL	111	Electric Meters & Motors	3	5	80	80
ENGL	110	College Composition I	3	3		48
HPER		Physical Education or First Aid & CPR*	2	2		32
MATH	134	Technical Algebra II	2	2	32	32
PSYC	100	Human Relations in Organization	2	2		32
<b>2<sup>nd</sup> Semester Totals</b>			<b>17</b>	<b>19</b>	<b>192</b>	<b>304</b>

ECAL	201	Alternating Current Theory	5	5	80	80
ECAL	211	AC Measurements Lab	4	6	96	96
ECAL	223	Electronic Devices	4	8	128	128
ECAL	241	Basic Motor Controls	3	6	96	96
ENGL	105	Business & Technical Communications	3	3		48
<b>3<sup>rd</sup> Semester Totals</b>			<b>19</b>	<b>28</b>	<b>400</b>	<b>448</b>



ECAL	203	Advanced Code Study	3	3	48	48
ECAL	204	Electrical Planning & Estimating	4	4	64	64
ECAL	205	Electrical Design & Lighting	3	4	64	64
ECAL	233	Commercial Wiring Lab	3	6	96	96
ECAL	243	Programmable Controllers	3	6	96	96
<b>4<sup>th</sup> Semester Totals</b>			<b>16</b>	<b>23</b>	<b>368</b>	<b>368</b>

<b>AAS Electrical Technology - Electrical Construction</b>	<b>72</b>	<b>94</b>	<b>1,312</b>	<b>1,504</b>
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\* 2 credits in Wellness- First Aid & CPR are recommended, however the following are also accepted (HPER 100, 101, 102, or 210, MUSC 115, 117, 138, or 157, NUTR, THEA)

**ND Board of Electricity typically grants 2000 hrs of apprenticeship credit with this degree.**



## Electrical Technology - Industrial Option

Course			Sem Cr	Hrs/ Week	Contact Hours	
Dept	#	Title			Electrical	Total
ECAL	101	Electrical Fundamentals	5	5	80	80
ECAL	103	Electrical Code Study	4	4	64	64
ECAL	133	Basic Wiring	3	5	80	80
ECAL	137	Electrical Drafting	2	4	64	64
CIS	101	Computer Literacy	2	2		32
MATH	132	Technical Algebra I	2	2	32	32
MATH	136	Technical Trigonometry	2	2	32	32
<b>1<sup>st</sup> Semester Totals</b>			<b>20</b>	<b>24</b>	<b>352</b>	<b>384</b>

ECAL	102	Electrical Fundamentals	5	5	80	80
ECAL	111	Electric Meters & Motors	3	5	80	80
ENGL	110	College Composition I	3	3		48
HPER		Physical Education or First Aid & CPR*	2	2		32
MATH	134	Technical Algebra II	2	2	32	32
PSYC	100	Human Relations in Organization	2	2		32
<b>2<sup>nd</sup> Semester Totals</b>			<b>17</b>	<b>19</b>	<b>192</b>	<b>304</b>

ECAL	201	Alternating Current Theory	5	5	80	80
ECAL	211	AC Measurements Lab	4	6	96	96
ECAL	223	Electronic Devices	4	8	128	128
ECAL	241	Basic Motor Controls	3	6	96	96
ENGL	105	Business & Technical Communications	3	3		48
<b>3<sup>rd</sup> Semester Totals</b>			<b>19</b>	<b>28</b>	<b>400</b>	<b>448</b>



ECAL	205	Electrical Design & Lighting	3	4	64	64
ECAL	224	Automated Industrial Controls	5	10	160	160
ECAL	243	Programmable Controllers	3	6	96	96
ECAL	244	Electric Machines & Solid State Drives	5	10	160	160
<b>4<sup>th</sup> Semester Totals</b>			<b>16</b>	<b>23</b>	<b>480</b>	<b>480</b>

<b>Program Summary:</b>						
<b>AAS Electrical Technology - Industrial Option</b>			<b>72</b>	<b>94</b>	<b>1,424</b>	<b>1,616</b>

\* 2 credits in Wellness- First Aid & CPR are recommended, however the following are also accepted (HPER 100, 101, 102, or 210, MUSC 115, 117, 138, or 157, NUTR, THEA)

**ND Board of Electricity typically grants 2000 hrs of apprenticeship credit with this degree.**



## Electrical Technology - Master Technician Option

Course			Sem Cr	Hrs/ Week	Contact Hours	
Dept	#	Title			Electrical	Total
ECAL	101	Electrical Fundamentals	5	5	80	80
ECAL	103	Electrical Code Study	4	4	64	64
ECAL	133	Basic Wiring	3	5	80	80
ECAL	137	Electrical Drafting	2	4	64	64
CIS	101	Computer Literacy	2	2		32
MATH	132	Technical Algebra I	2	2	32	32
MATH	136	Technical Trigonometry	2	2	32	32
<b>1<sup>st</sup> Semester Totals</b>			<b>20</b>	<b>24</b>	<b>352</b>	<b>384</b>

ECAL	102	Electrical Fundamentals	5	5	80	80
ECAL	111	Electric Meters & Motors	3	5	80	80
ENGL	110	College Composition I	3	3		48
HPER		Physical Education or First Aid & CPR*	2	2		32
MATH	134	Technical Algebra II	2	2	32	32
PSYC	100	Human Relations in Organization	2	2		32
<b>2<sup>nd</sup> Semester Totals</b>			<b>17</b>	<b>19</b>	<b>192</b>	<b>304</b>

ECAL	201	Alternating Current Theory	5	5	80	80
ECAL	211	AC Measurements Lab	4	6	96	96
ECAL	223	Electronic Devices	4	8	128	128
ECAL	241	Basic Motor Controls	3	6	96	96
ENGL	105	Business & Technical Communications	3	3		48
<b>3<sup>rd</sup> Semester Totals</b>			<b>19</b>	<b>28</b>	<b>400</b>	<b>448</b>



ECAL	203	Advanced Code Study	3	3	48	48
ECAL	204	Electrical Planning & Estimating	4	4	64	64
ECAL	205	Electrical Design & Lighting	3	4	64	64
ECAL	233	Commercial Wiring Lab	3	6	96	96
ECAL	243	Programmable Controllers	3	6	96	96
<b>4<sup>th</sup> Semester Totals</b>			<b>16</b>	<b>23</b>	<b>368</b>	<b>368</b>

<b>AAS Electrical Technology - Construction Option</b>	<b>72</b>	<b>94</b>	<b>1,312</b>	<b>1,504</b>
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MFGT	130	Industrial Safety	2	2	32	32
ECAL	224	Automated Industrial Controls	5	10	160	161
ECAL	237	House Wiring Rough-In	1	2	32	32
ECAL	245	Medium & High Voltage	1	2	32	32
CIS		Networking**	4	4	64	64
<b>5<sup>th</sup> Semester Totals</b>			<b>13</b>	<b>20</b>	<b>320</b>	<b>320</b>

ECAL	238	House Wiring Trim-Out	1	2	32	32
ECAL	244	Electric Machines & Solid State Drives	5	10	160	160
ECAL	246	Alarm, Communications & Data Systems	3	6	96	96
CIS		Networking**	4	4	64	64
<b>6<sup>th</sup> Semester Totals</b>			<b>13</b>	<b>22</b>	<b>352</b>	<b>352</b>

<b>AAS Electrical Technology - Master Technician.</b>	<b>98</b>	<b>136</b>	<b>1,984</b>	<b>2,176</b>
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\* 2 credits in Wellness- First Aid & CPR are recommended, however the following are also accepted (HPER 100, 101, 102, or 210, MUSC 115, 117, 138, or 157, NUTR, THEA)

\*\* A minimum of 7 credits of Networking classes from the following: Network Plus, BiCiSi, CIS 234, 265, 266, 267, or 268.

ND Board of Electricity typically grants 2000 hrs of apprenticeship credit with this degree.



## ATTENDANCE POLICY ELECTRICAL TECHNOLOGY DEPARTMENT

Attendance is critical to your success in college, just as it is to your future success at work. We want you to succeed and our past experience tells us that your chances of success are best when you make every effort to attend class.

Attendance is especially critical in all of our technology programs at NDSCS because our learning environments are very specialized. Because of the special equipment and facilities needed to provide you with a quality education, it is often impossible to make up work that is missed due to absences from class.

Therefore, the Electrical Technology Department has instituted a department attendance policy that applies to all courses offered by the department. This policy is very stringent because of time credit for apprenticeship, the demands of the electrical industry, state electrical boards, etc. The policy is as follows:

### Attendance Policy

Any student absent more than 5% of a course's total contact hours will be dropped from the course, or will be given an "F" letter grade.

### Make Up Policy

- A. Students may retake a course they have failed.
- B. Students may make up work while they are enrolled in a course as follows:
  - 1. All make up work must be done in advance, or within one week of the absence.
  - 2. Make up arrangements must be made with the instructor of the class.
  - 3. The maximum make up is for four days of absence.
  - 4. Students requesting exceptions to the above, due to unusual circumstances such as: serious injury, serious illness or family emergencies, must present their case before the Electrical Department Faculty, in a formal Electrical Department meeting.

Students receiving sanctions as a result of this policy can file a written appeal with Mr. Richard Graham, Division Academic Counselor, in the Technologies & Services Division Office, 115 Old Main. The appeal will be reviewed by the student's advisor, the appropriate Department Chair (or his or her designee), the Division Academic Counselor, and the Division Dean.

**The following specific policy will be in effect for classes in the Electrical Technology Program:**

Maximum Days Absent	Specific class examples.
4	Classes that meet five days per week: ECAL 101, ECAL 102, ECAL 111, ECAL 133, ECAL 201, ECAL 224, ECAL 244.
3	Classes that meet four days per week: ECAL 103, ECAL 204, ECAL 205 and ECAL 223.
2	Classes that meet three days per week: ECAL 203, ECAL 211, ECAL 233, ECAL 241, ECAL 243, and ECAL 246.
2	Classes that meet two days per week or four days per week for nine weeks: ECAL 137, ECAL 237, ECAL 238, ECAL 245, MATH 132, MATH 134, MATH136, MFGT 130.
When students miss one hour of a two hour class, such as ECAL 137, 223, 233, 241, 243, the following will also apply: 2 hours = 1 day, 4 hours = 2 days, 6 hours = 3 days, 8 hours = 4 days.	

I understand the above attendance policy. I have received a copy of this policy.

PRINT NAME: \_\_\_\_\_ ID# \_\_\_\_\_

SIGNATURE: \_\_\_\_\_ DATE \_\_\_\_\_



# **NDSCS ELECTRICAL TECHNOLOGY DEPT**

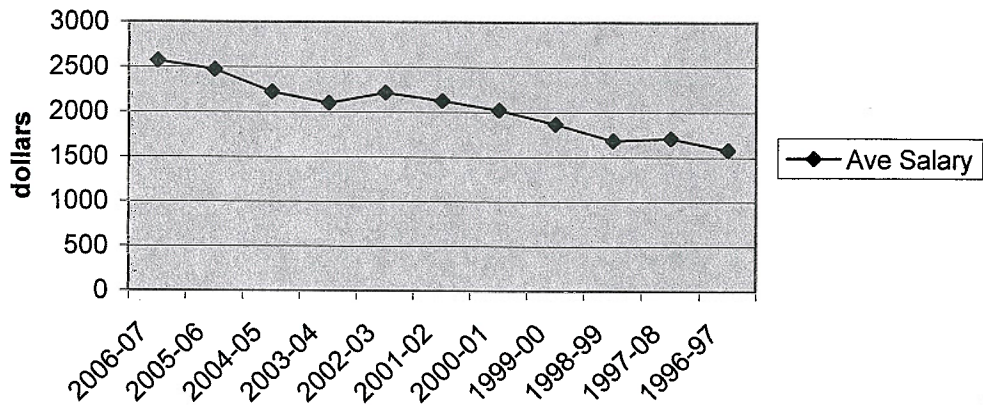
## **Placement Data Summary**

**1997-2007**

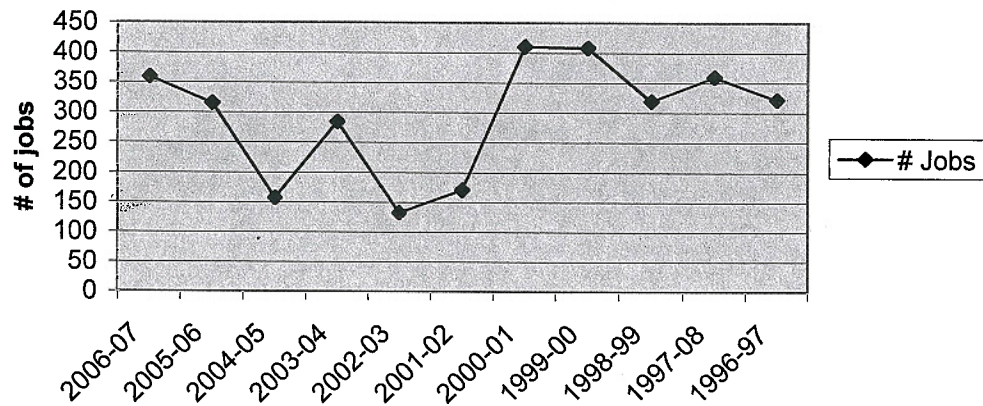
<b>Year</b>	<b># Grad's</b>	<b># Jobs</b>	<b>Ave Salary</b>
2006-07	59	359	2569
2005-06	53	315	2470
2004-05	61	157	2222
2003-04	69	284	2095
2002-03	55	132	2214
2001-02	56	170	2125
2000-01	71	410	2021
1999-00	57	408	1864
1998-99	53	319	1683
1997-08	55	359	1708
1996-97	41	321	1579



**Average Monthly Salary**



**# Jobs Available to Graduates**





2006-07

NORTH DAKOTA STATE COLLEGE OF SCIENCE  
STATUS OF GRADUATES

Division: TECHNOLOGIES AND SERVICES  
Department: ELECTRICAL TECHNOLOGY  
(Including Construction, Industrial and Master)

	<u>Number of Graduates</u>	<u>Percent</u>	<u>% of Graduates Available</u>
Accepted related employment.....	57	83	97
Accepted unrelated employment.....	2	3	3
Seeking employment.....	<u>0</u>	<u>0</u>	<u>0</u>
Subtotal (Graduates available for employment)	<u><u>59</u></u>	<u><u>86</u></u>	<u><u>100</u></u>
Graduates, but NOT seeking employment:			
Additional college.....	5	7	
Seeking employment at a later date.....	2	3	
Unknown.....	<u>3</u>	<u>4</u>	
Subtotal (Graduates not seeking employment).....	<u><u>10</u></u>	<u><u>14</u></u>	
TOTAL (ALL STUDENTS)	<u><u>69</u></u>	<u><u>100</u></u>	

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Number of employment opportunities reported 359

Average monthly salary accepted \$2,569

Range of salaries from \$1,647 \$ 6,067

Number of graduates accepting related employment in ND 22

Percentage of graduates accepting related employment in ND 39%

Percentage of graduates employed or pursuing additional college 97% 64/66=97  
69-unknown= 66 related + unrelated + College = 64



2006-07

TECHNOLOGIES AND SERVICES DIVISION  
Electrical Technology Department  
(Including Construction, Industrial and Master)

STUDENTS	OCCUPATIONAL PLANS & EMPLOYERS	LOCATION	DATE STARTED	
	Encore Electric	Englewood, CO	May-07	17.00
	Cedar Lake Electric	Fairbault, MN	May-07	14.50
	Fergus Electric	Fergus Falls, MN	May-07	11.00
	Hill Electric	Chokio, MN	Jun-07	10.00
	College, NDSCS Electrical Master Tech			
	ABC Electric	Bismarck, ND	Jul-07	10.00
	ND Union Electrical	Fargo, ND	May-07	12.00
	Energy Tech Systems	Bismarck, ND	Jun-07	15.00
	Encore Electric	Englewood, CO	May-07	13.40
	Liberty Electric	Great Falls, MT	May-07	14.00
	Minneapolis Industrial Electric	Fergus Falls, MN	Jun-07	10.93
	College, NDSCS Electrical Master Tech			
	Red River Electric	Moorhead, MN	May-07	11.50
	Wayne's Electric	Fargo, ND	May-07	12.00
	Unknown			
	Skeel's Electric	Bismarck, ND	May-07	13.50
	Willis Electric	Mandan, ND	Jan-07	12.75
	Muth Electric	Sioux Falls, SD	May-07	13.00
	Seeking at a later date			
	IE Miller (unrelated)	Williston, ND	May-07	
	Nordick Electric	Wheaton, MN	May-07	13.00
	Halliburton	Casper, WY	Jun-07	24.23077
	Encore Electric	Englewood, CO	Jun-07	18.00
	Expressway & Power Plant	Falkirk, ND	Jan-07	25.00
	Rio Tinto Energy	Sheridan, WY	May-07	23.65
	Rio Tinto Energy	Sheridan, WY	Jun-07	23.65
	College, UND Electrical Engineering			
	Arby's (unrelated)	Fargo, ND		
	Minneapolis Industrial Electric	Fergus Falls, MN	Jun-07	10.93
	Douglas Manufacturing	Alexandria, MN	Oct-07	17.00
	Denny's Electric and Motor Repair	Dickinson, ND	May-07	13.50
	JATC Union	Fargo, ND	May-07	10.98
	Minneapolis Industrial Electric	Fergus Falls, MN	Jun-07	10.93
	JATC Union	Fargo, ND	May-07	10.93
	Encore Electric	Englewood, CO	May-07	13.40
	Energy Tech Systems	Bismarck, ND	May-07	14.00
	Scott's Electric	Wahpeton, ND	May-07	13.00
	Loen Electric	Benson, MN	Dec-06	13.00
	Unknown			
	Montana Dakota Utilities	Bismarck, ND	May-07	22.39
	Agri-Industries	Sidney, MT	May-07	13.00
	TIC of Wyoming	Casper, WY	May-07	35.00
	Precision Electric	Fargo, ND	May-07	12.00
	College, NDSCS Electrical			
	Baker Hughes Centrilift	Rangely, CO	May-07	18.00



Cavendish Farms	Jamestown, ND	May-07	17.61
Bergstrom Electric	Fargo, ND	May-07	11.25
College, UND Business			
Rio Tinto Energy	Gillette, WY	May-07	20.00
Red River Electric	Moorhead, MN	May-07	11.00
Arnt's Electric	Williston, ND	May-07	13.00
Grotberg Electric Inc.	Valley City, ND	May-07	12.00
Mike Wilhelm Electric	Bozeman, MT	May-07	15.00
Magnum Electric Inc.	Moorhead, MN	Aug-07	15.00
Paul's Electric	Wyndmere, ND	Jun-07	13.00
Summer's Electric	Breckenridge, MN	Aug-07	13.00
Samson Electric LTD	Park River, ND	May-07	9.50
Unknown			
River Valley Systems	Cambridge, NE	May-07	15.00
Berg Electric	Las Vegas, NV	Jun-07	20.00
Tech Electric	Livingston, MT	May-07	12.00
Red River Electric	Moorhead, MN	May-07	11.00
Seeking at a later date			
Bergstrom Electric	Fargo, ND	May-07	11.65
Rio Tinto Energy	Gillette, WY	May-07	23.65
Houska Electric	Fargo, ND	May-07	11.00
Daktronics	Brookings, SD	May-07	12.25
Douglas Machines	Alexandria, MN	May-07	17.50
Paul's Electric	Wyndmere, ND	Jun-07	14.00



2005-06

NORTH DAKOTA STATE COLLEGE OF SCIENCE  
STATUS OF GRADUATES

Division: TECHNOLOGIES AND SERVICES  
Department: ELECTRICAL TECHNOLOGY  
(Including Construction, Industrial and Master)

	Number of Graduates	Percent	% of Graduates Available
Accepted related employment.....	51	81	96
Accepted unrelated employment.....	1	2	2
Seeking employment.....	<u>1</u>	<u>2</u>	<u>2</u>
Subtotal (Graduates available for employment)	<u>53</u>	<u>84</u>	<u>100</u>
Graduates, but NOT seeking employment:			
Additional college.....	5	8	
Seeking employment at a later date.....	0	0	
Unknown.....	<u>5</u>	<u>8</u>	
Subtotal (Graduates not seeking employment).....	<u>10</u>	<u>16</u>	
TOTAL (ALL STUDENTS)	<u>63</u>	<u>100</u>	

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Number of employment opportunities reported 315

Average monthly salary accepted \$2,470

Range of salaries from \$ 1,360 to \$ 3,840

Number of graduates accepting related employment in ND 23

Percentage of graduates accepting related employment in ND 45%

Percentage of graduates employed or pursuing additional college 98%



2005-06

TECHNOLOGIES AND SERVICES DIVISION  
 Electrical Technology Department  
 (Including Construction, Industrial and Master)

STUDENTS	OCCUPATIONAL PLANS & EMPLOYERS	LOCATION	DATE STARTED
	Red River Electric	Moorhead, MN	May-06
	Minot Electric	Minot, ND	May-06
	Berg Electric	Sacramento, CA	Jun-05
	Triangle Electric	Williston, ND	Sep-06
	Tech Electric	Livingston, MT	May-06
	Minnkota Power Coop	Center, ND	Jul-06
	Daktronics	Brookings, SD	Sep-06
	Fagen Inc	Granite Falls, MN	May-06
	A & F Electric	Williston, ND	Jun-06
	Western Energy Company	Colstrip, MT	Jul-06
	Unknown		
	MRL Equipment	Billings, MT	Jun-06
	Silver Construction (unrelated)	Pelican Rapids, MN	May-06
	Imation	Wahpeton, ND	May-06
	Berg Electric	Sacramento, CA	Jun-06
	Electric Systems Inc.	Bismarck, ND	May-06
	College, NDSU Electrical Engineering		
	Sax Electric	Williston, ND	
	College, NDSCS Electronic Technology		
	Washington Group International	Hardin, MT	
	Thunder Basin Coal Company	Gillette, WY	
	Douglas Machine	Alexandria, MN	May-06
	Grotberg Electric	Gwinner, ND	May-06
	Dakota Hills Electric	Kindred, ND	May-06
	Kennecott Energy	Gillette, WY	May-06
	Bergstrom Electric	Bismarck, ND	Jul-06
	Teton Electric	Choteau, MT	May-06
	Bergstrom Electric	Fargo, ND	May-06
	Don's Heating	Hankinson, ND	Mar-06
	Unknown		
	Red River Electric	Moorhead, MN	May-06
	Skeel's Electric	Bismarck, ND	May-06
	JATC	Bismarck, ND	



College, NDSCS Electrical Master Tech

Don's Electric	Bismarck, ND	May-06
Nordick Electric	Wahpeton, ND	Jul-06

Unknown

Coyle Electric	Bowman, ND	May-06
Western Energy Company	Colstrip, MT	May-06
Fagen Inc	Underwood, ND	May-06
Fagen Inc	Granite Falls, MN	Jun-06

College, NDSCS Electrical Master Tech

Bergstrom Electric	Bismarck, ND	May-06
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Unknown

Legge Farms	Spiritwood, ND	May-06
Fergus Electric	Fergus Falls, MN	May-06
Berg Electric	Las Vegas, NV	Jun-06
Tech Electric	MT	May-06
MDU	Bismarck, ND	May-06

College, NDSCS Electronic Technology

Liberty Electric	Missoula, MT	Jun-06
Employed	Fargo, ND	Aug-06
Berg Electric	Sacramento, CA	Jun-06
Rick's Electric	Moorhead, MN	Jun-06

Seeking

Hobart	Bismarck, ND	Jun-06
Colowyo Coal Mine	Craig, CO	Jun-06
Berg Electric	Las Vegas, NV	Jun-06

Unknown

Western Energy Company	Colstrip, MT	May-06
Spring Creek Mine	Decker, MT	May-06
Kennecott Energy	Gillette, WY	May-06
Douglas Machine	Alexandria, MN	May-06



2004-05

NORTH DAKOTA STATE COLLEGE OF SCIENCE  
STATUS OF GRADUATES

Division: TECHNOLOGIES AND SERVICES  
Department: ELECTRICAL TECHNOLOGY  
(Including Construction, Industrial and Master)

	Number of Graduates	Percent	% of Graduates Available
Accepted related employment.....	59	93	97
Accepted unrelated employment.....	2	3	3
Seeking employment.....	0	0	0
Subtotal (Graduates available for employment)	<u>61</u>	<u>96</u>	<u>100</u>
Graduates, but NOT seeking employment:			
Additional college.....	1	2	
Seeking employment at a later date.....	0	0	
Unknown.....	<u>1</u>	<u>2</u>	
Subtotal (Graduates not seeking employment).....	<u>2</u>	<u>4</u>	
TOTAL (ALL STUDENTS)	<u>63</u>	<u>100</u>	

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Number of employment opportunities reported 157

Average monthly salary accepted \$2,222

Range of salaries from \$1,440 to \$3,600

Number of graduates accepting employment in ND 33

Percentage of graduates accepting employment in ND 54%

Percentage of graduates employed or pursuing additional college 100%



2004-05

TECHNOLOGIES AND SERVICES DIVISION  
Electrical Technology Department  
(Including Construction, Industrial and Master)

STUDENTS	OCCUPATIONAL PLANS & EMPLOYERS	LOCATION	DATE STARTED
	K & S Electric	Plevna	MT May-05
	Kennecott Energy	Decker	MT May-05
	Smart Wire	Fargo	ND May-05
	Fulkine Mine	Underwood	ND May-05
	Kennecott Energy	Craig	CO May-05
	Douglas Machine	Alexandria	MN May-05
	Berger Electric, Inc.	Dickinson	ND May-05
	Dakota Electric	Fargo	ND May-05
	Berg Electric	Las Vegas	NV Jul-05
	Western Energy Company	Colstrip	MT May-05
	Red River Electric, Inc	Moorhead	MN May-05
	Muth Electric	Aberdeen	SD May-05
	Liberty Electric	Great Falls	MT May-05
	Scott's Electric	Jamestown	ND Oct-05
	Corp of Engineers	Riverdale	ND May-05
	MDU	Bismarck	ND May-05
	AMF Electric	Williston	ND May-05
	Action Electric	Billings	MT May-05
	JDP Electric	Fargo	ND Jun-05
	Grotenberg Electric, Inc	Valley City	ND May-05
	AJ Moore Electric	Delanow	MN Aug-05
	Barr's Electric	Ortonville	MN May-05
	Paul's Electric	Wyndmere	ND May-05
	Minn-Dak Farmers Cooperative	Wahpeton	ND May-05
	Totally TR Electric	Burnsville	MN Jun-05
	Kennecott Energy	Gillette	WY Jun-05
	Burlington Northern Santa Fe	Minot	ND Apr-05
	Kennecott Energy	Craig	CO May-05
	Great River Energy	Underwood	ND May-05
	Western Engineer Solutions	Bismarck	ND May-05
	Dakota Electric	Fargo	ND May-05
	Loen Electric, Inc.	Benson	MN May-05
	HA Thompson & Sons	Bismarck	ND May-05
	Triangle Electric	Williston	ND May-05
	Action Electric	Billings	MT May-05
	Kennecott Energy	Gillette	WY May-05
	Thielen Electric	St. Cloud	MN May-05
	Western Energy Company	Colstrip	MT Jun-05
	Red River Electric, Inc	Moorhead	MN May-05
	CDJ Electric, Plumbing, & Heating	Britton	SD May-05



Messner Electric	Hancock	MN	May-05
Dakotas JATC	Minot	ND	Jun-05
Red River Electric, Inc	Moorhead	MN	May-05
JATC	Bismarck	ND	May-05
Min-Dak	Wahpeton	ND	May-05
Magnum Electric	Moorhead	MN	May-05
Phase Electric	Bloomington	MN	Jul-05
Triangle Electric	Williston	ND	May-05
Entze Ranch (unrelated)	Golden Valley	ND	May-05
Whetstone Ag Supplys (unrelated)	Wilmot	ND	May-05
Liberty Electric	Missoula	MT	Jun-05
College, NDSCS Master Technician			
Dakota Refrigeration	Fargo	ND	May-05
Union (JATL)	Billings	MT	May-05
Century Electric	Grand Forks	ND	May-05
Edling Electric	Bismarck	ND	May-05
Climate Controls	Fargo	ND	May-05
Central Power Cooperation	Minot	ND	May-05
Bergstrom Electric	Fargo	ND	May-05
Falkirk Coal Mine	Underwood	ND	May-05
Cass County Electric	Fargo	ND	May-05
Minn-Dak Farmers Cooperative	Wahpeton	ND	May-05