



AY 2013 – 2014
Program Review

Electric Lineworker

1. Introduction and Program Overview

a. Program Description

The Electric Line Worker program is a one-year, 38 credit hour, Technical Certificate program located at the South Campus, 29 and D road. (see appendix A)

b. History of Colorado Mesa Electric Line Worker Program And Mesa Hotline School

The history of the Electric Line Worker program is intertwined with the Mesa Hot Line School, and the following history reflects that relationship.

The first annual Western Slope Hotstick School was held at Mesa College on April 18 - 22, 1966 and April 25 - 29, 1966 with Roy Adley of A.B. Chance Company; Tom Tillery of the James Kearney Company; and R. Travis Jones of Colorado-Ute as instructors.



- Don Purdy (Holy Cross Electric Assn.)
- Everett Johnson (Empire Electric)
- Gene McLeod (Yampa Valley)
- Vern A. Dull (White River)
- Harvey Jepsen (Gunnison County)
- Lloyd A. McClelland (Yampa Valley)
- Howard Englert (Mountain Parks)
- Russell Cramer (Moon Lake)
- Clarence L. Ross (Grand Valley)
- Jack Colvin (Grand Valley)

Jack Colvin and Clarence Ross were assigned to look into the possibility of acquiring a lease from the Bureau of Land Management on a site south of Grand Junction. Mr. Colvin would stake the site for structures required with the group deciding to build the distribution and 138kV transmission structure to be available by April 18, 1966, for the first scheduled school.

Russell Cramer was appointed Material Coordinator. He completed the list material available to construct the transmission and distribution structures. Vernon Dull, Chairman of the Distribution Construction Committee, asked that Don Purdy be assigned as Co-Chairman for the construction planning of this phase. The committee prepared a basic layout of the number of structures required and the span lengths for the distribution and transmission facilities to be available so that the construction could be started.

For the construction of the training field, the following organizations furnished men and/or materials:

- White River Electric
- Yampa Valley Electric
- Colorado-Ute
- Grand Valley Electric
- Moon Lake Electric
- Holy Cross Electric
- Bureau of Reclamation
- San Luis Valley Electric

Initially the program was located on the CMU campus with classrooms and portable short pole training field. In January of 1978, the members voted to move the training field to the "College Farm". The field was moved by Mesa College Lineman class prior to the Hotline School of 1978. The first underground classes were held at the "hog barn" in 1978. The Electric Lineman class, in 1979, put in a complete 69kV to 7.2 kV substations, a 2400/4160 system and a new 7.2 kV underground field. With this addition, the field had 48 distribution structures and 14 transmission structures from 69 kV to 230 kV.

In the spring of 1982 a steel transmission tower was added and a new and more accessible underground facility was installed to meet the growing requests for updated underground instruction. Hands-on training for underground switching and fault locating started in 1982. Additionally, a modular classroom was built that year. Hot Tension Stringing started in 1986, on the west side of the field, and then moved to the east side, where it has stayed since 1995.

In 1987 the Board of Directors agreed to move the school headquarters for the two Hotline School from the Ramada Inn on Horizon Drive, across the street to the Grand Junction Hilton. Classroom facilities at the Field Site were moved to the south end of the field in 1990 and the rest of the facilities have also been moved to the south end of the training site.

Today WCCC continues to register students, and provides additional administrative support to the Mesa Hotline School, as well as requiring the Electric Line Worker students to attend this industry training.

The Mesa Hotline School, is held the first two weeks of May, and is the only program of its type in the western United States. The school consists of two one-week sessions, meeting on Monday through Thursdays. It has enrolled participants from Colorado, Utah, Arizona, Wyoming, Nevada, Kansas, Oregon, Washington, California, New Mexico, Nebraska, Alaska and many other states. Experienced instructors from manufacturers and companies are screened by the instructional committees of the school to provide the expert training necessary to keep power flowing to consumers in all parts of the country in a safe and productive manner.

With the expansion of the school to include training opportunities in underground installations and maintenance, the school provides instruction in about every type of line work that will confront workers on the job. The school is designed to acquaint and upgrade Linemen with approved practices and supervising skills used in the industry. Also, the school administers a lineman testing program which is given two times a year. The program is a full day with a written test given the first half day and an oral review given the second half of the day. The test dates are centered on the main school meeting dates in January and July. This program was first started in 1986. There have been 35 sessions administered with 179 participants being successful in passing the testing procedure. The program will only allow 5 participants at each session and that person must have a minimum of 8,500 hours of work experience before they can be tested.

With the cooperative arrangement between Mesa Hot Line School and Colorado Mesa University Electric Line Worker program has allowed our students to have current training provided by experts in the electric transmission industry.

c. Recommendations from previous review weaknesses identified in the previous program review were:

- Equipment that needed to be updated
- Recruitment

In 2008 the program acquired a newer bucket truck to replace the older unit, and in 2012 a newer trencher unit to replace the older unit. A newer Bucket/Digger truck is once again been put on the equipment list for purchase as well as more safety harnesses for a more broad coverage of safety apparatus used by industry line workers to better prepare them for their future occupation.

Recruitment has been an on-going effort through new brochures, advertisements, internet presence with web page and Facebook accounts. We have invited high school students and parents to attend a tour of the Hot Line School and facilities. A summer camp was offered for secondary students, but no one signed up for the class. The Hot Line School has also promoted the Line Worker program through their advertising mediums.

d. Mission Statement

“Colorado Mesa University shall also maintain a community college including vocational and technical programs role and mission.” Committed to a personal approach, Colorado Mesa University is a dynamic learning environment that offers abundant opportunities for students and the larger community to grow intellectually, professionally, and personally. By celebrating exceptional teaching, academic excellence, scholarly and creative activities, and by encouraging diversity, critical thinking, and social responsibility, CMU advances the common good of Colorado and beyond.

e. Locational/comparative advantage

The Colorado Mesa University Line Worker program is the only program west of the Continental Divide; this includes Colorado, Utah, Wyoming and New Mexico.

f. Unique characteristics

Our program has a requirement of Hot Line School for graduation. We are the only program in Colorado that mandates this industry sponsored school.

2. Curriculum

a. Program curriculum

This program covers all areas of training required to work with electric lines, including: basic skills in studies of electricity, math, and fundamentals of line work, transformer connections, and underground installation. In addition to training at the field location, all students are encouraged to obtain a Red Cross First Aid and a CPR card as a requirement for employment. With this certificate, students will be prepared for entry-level positions as electric line mechanics, electric lineworkers, or power lineworkers.

Students should work closely with a faculty advisor when selecting and scheduling courses prior to registration.

Degree Requirements:

- 2.00 cumulative GPA or higher in all CMU coursework.
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- A student must follow the CMU graduation requirements either from 1) the program sheet for the major in effect at the time the student officially declares a major; or 2) a program sheet for the major approved for a year subsequent to the year during which the student officially declares the major and is approved for the student by the department head. Because a program may have requirements specific to the degree, the student should check with the faculty advisor for additional criteria. It is the student's responsibility to be aware of, and follow, all requirements for the degree being pursued. Any exceptions or substitutions must be approved by the student's faculty advisor and Department Head.
- When filling out the program sheet a course can be used only once.
- See the “Undergraduate Graduation Requirements” in the catalog for additional graduation information.

TECHNICAL CERTIFICATE: ELECTRIC LINeworker

(38 semester hours)

Course No	Title	Sem.hrs
MATH 107	Career Mathematics	3
ELCL 120	Fundamentals of Electricity	4
ELCL 125	Job Training and Safety	2
ELCL 131	Electrical Distribution Theory I	4
ELCL 131L	Electrical Distribution Theory I Lab	4

ELCL 132	Electrical Distribution Theory II	4
ELCL 132L	Electrical Distribution Theory II Lab	2
ELCL 137	Advanced Electrical Distribution	2
ELCL 137L	Advanced Electrical Distribution Lab	4
ELCL 140	Underground Procedure	4
ELCL 140L	Underground Procedure Lab	2
ELCL 145	Hotline Procedures	1
ELCL 145L	Hotline Procedures Lab	2

***Special Requirements and Recommendations:**

- Students will be encouraged to have current First Aid **and** CPR certification before they successfully complete the requirements of this program. This may be achieved by any of the following: (1) holding current cards; (2) obtaining American Red Cross “Standard” or “Advanced” rating **and** American Heart Association or equivalent certification, or (3) successfully completing KINE 265 offered by Colorado Mesa University.
- Additional expenses – Students will be required to purchase or have approximately \$1000.00 in tools and personal equipment. This does not include required textbooks or an adequate pair of work boots. These costs may vary with student needs and brand or quality of tools or equipment purchased. All safety glasses must meet the minimum industry safety standard of Z-87 with side shields.

b. Program currency

There have been no curricular changes since the last program review. Although, we have added safety harness training and implementation in all the courses requiring free climbing.

c. Program delivery

The course work is delivered through lecture, demonstration and field work. The Lecturers use multimedia software and hardware as well as conventional instruction. Field instruction is accomplished through low pole practice, instruction, climbing rings, transmission lines for insulators and transformer changes plus cross bars. Video and photos of the field instruction and practice are used to debrief and instruct as well as postings on Facebook to help promote the program.

Personal tutoring is offered as needed through scheduled sessions with appropriate individuals for the students.

3. Analysis of Student Demand and Success

- **Majors** (see chart)

2007-08	2008-09	2009-10	2010-11	2011-12	5yr ave.
28	21	52	34	17	30

- **Registrations and Credit Hours by Student**

2007-08		2008-09		2009-10		2010-11		2011-12	
Enroll	SCH	Enroll	SCH	Enroll	SCH	Enroll	SCH	Enroll	SCH
369	1000	204	609	576	1694	361	1068	188	553

- **Registrations and Credit Hours by Semester**

2007-08		2008-09		2009-10		2010-2011		2011-12		5yr Ave	
Fall	Spr	Fall	Spr	Fall	Spr	Fall	Spr	Fall	Spr	Fall	Spr
28	27	21	15	52	46	34	28	17	15	30	28

- **Number of Graduates**

2007-08	2008-09	2009-10	2010-11	2011-12
24	15	44	27	15

- **Retention rates**

Retention is only for fall semester to spring semester. This is a one year certificate.

2007-08	2008-09	2009-10	2010-11	2011-12
96%	72%	88%	82%	88%

- **Student Successes and Recognitions**

CAST –Construction and Skill Tests

28 took the test, 20 passed. This is a pass/fail test. Required for working for the utility companies. If not working for a utility company, jobs are still available.

4. Academic Program Resources

- **Faculty** (see appendix B)
 - Ratio of Full-time faculty equivalent
 - Credit hours
 - Faculty success/quality/recognitions
 - Faculty Vitas
- **Financial information** (see appendix C)
- **Library assessment** (see appendix D)
- **Physical Facilities** (see appendix E)
 - Two classrooms
 - Two offices
 - Interior storage room
 - Vehicle and equipment storage
 - Interior short pole and transformer trainer
 - Fenced equipment yard
 - Large pole yard and underground field
- **Instructional technology and equipment**

- Office and classroom computers
 - Copier
 - Two digital projectors and screens
 - Miscellaneous training units
 - Audio and visual media sufficient for instruction
- **Efficiencies in the way the program is operated**

We offer two tracks for students. One morning session that begins at 7:00am, ends at 1:30pm and another that begins at 10:30am and ends at 4:30pm. This provides students the option to work while attending classes. The times also allow a small overlap for interaction and instructor efficiency.

5. Student Learning Outcomes and Assessments

- **Program Outcomes for Electric Line Worker Program**

Communication:

- Apply principles of grammar and vocabulary in the documentation required to perform the duties of a Groundman or an Apprentice Lineman for the electrical industry.
- Develop a daily written plan that all crew members are required to produce to establish the daily work routine and safety plan.

Computational:

- Apply mathematical concepts to perform electrical formula calculations used for finding voltages, amperes, resistance, and power.

Critical Thinking:

- Be able to evaluate the situation, and determine which Standard Operating Procedure (SOP) to apply, locate, gather, and organize material to perform the job in a safe and timely manner.

Specialized Knowledge:

- Describe the scope and application of principle features of an electric line worker, including core practices required by the electrical industry.

Applied Learning:

- Demonstrate familiarity with Standard Operating Procedures, climbing structures, replacing associated equipment, pole setting procedures, and soil recognition for underground applications.
- Perform all required safety procedures.

Ethics:

- Evaluate company policies, and perform in a manner that is consistent to Federal and State laws.
 - Perform as a member of a crew in an ethical manner consistent with public, and company policy.
- **Assessments:** (see appendix F)
 - Assessment Committee has only provided the 2007/2008 assessment since the programs are on a rotation.
 - Assessments were suspended three years ago. We worked on new outcomes and assessments, as well as a new process. These outcomes and assessments are shown above and in the appendix. Although, we have not done the first set of assessments as of this date, we have been assessing student progress through the use of tests and advisory committee hands-on assessments that have been used for the last five years. The advisory committee sets two assessment dates at the beginning of the semester. On the assigned day, the committee shows and announces to the classes what they are going to be assessed on that day. The students do not know what their tasks for the days are until the committee announces them at class. The members use a rubric that reflects industry standards, and rates each student from 1-3, with one being needs improvement and 3 as above average. They evaluate four to five competencies with each assessment and observe the students in a crew environment, used by industry to assess their ability to work as a team.
These "real world" assessments are exceptional, and keeps our program on track and viable. The feed-back after the assessments point out concerns with each student, and any changes the instructors need to make in either curriculum or process. Through this process, we identified the need to change instructors between groups at semester break so the students get two different viewpoints and processes than they would get with one instructor. For this reason, we fell we are unique with two instructors, and two different approaches to how to accomplish the tasks. Our students should be well rounded to join the workforce either in a union or municipal environment.
 - The only assessments that we have that are viable are the program advisory committee input and assessments. We have summarized them below.
 - See attached advisory committee assessments.

6. Future Program Plans

- **Vision**

The Electric Line Worker Program wants to take full advantage of the new facilities, when we move, and offer upgrade training to other entities when we do not have students in courses.

We would like to maintain a student to full-time instructor ratio of 20/1.

The instructors are pursuing becoming training coordinators for Dennis Merchant Apprenticeship, and are waiting for further advisement. We are also working with the advisory committee on job shadowing experience while the students are on break. This could lead to internship or apprenticeship opportunities with local employers, such as Grand Valley Power, Xcel Energy, Holy Cross, and International Brotherhood of Electrical Workers #969.

For registered students, we have an orientation day two weeks before school starts. This allows the students to look, touch, feel, and purchase their equipment for school. We have also looked into selling tool kits through the college bookstore, so students can take advantage of the financial aid. We would like to implement a tool buy- back program for students that do not continue the trade, or possibly they are just not happy with what they originally purchased.

We have had an Alumni organization for the past two years and it helps peer to peer teaching.

There is possibility of combining the Math 107 and Fundamentals of Electricity (ELCL 120). The Lineworker program will approach the advisory committee looking into the curriculum of second semester, and upon advisement we might also merge the ELCL 132 (Advance Electrical Theory) and ELCL 140 (Underground Procedure) and the corresponding Lab classes.

We are going to continue with mock interviews and resume building to prepare students, to take the CAST (Construction and Skilled Trades) test, and other types of pre-employment tests.

For students of the program with learning disabilities we are looking at options such as audiobooks, although we have been unable to find them, we might try to make our own.

We are also looking into specialized training for the instructors such as:

- Fall-restraint device certifiers
- OSHA 500 training to be able to give OSHA 10 and OSHA 30
- First Aid/CPR/BBP/AED training
- Flagging/ Traffic control

Upon advisement of the Advisory Committee we switch instructors at semester break. This will give the students a varied experience and better prepare them for the work force.

- **Strengths**

- Western Colorado Community College is the host facility of Mesa Hot Line School (www.mesahotlineschool.com). At this website there is a link to the WCCC line worker program.
- Our pole yard consists of 125 distribution poles, 50 transmission structures, and a recently updated URD facility.
- Students of the line worker program have 500-600 contact hours more in the field, than the shorter programs. With more contact hours the students have more time to master their skills. The way our program works in the lab session, students are split up into 4 man crews. Generally we have a crew swap every six weeks. This prepares students for real life work situations.
- Advisory Committee assesses students quarterly, using a blind assessment, as well as make recommendations for the future of the program
- Students of the Line Worker Program have "honorary" scholarship opportunities unique to our program offered from the Mesa Hot Line School (L.D. Holt, Mike King, and Larry Schutte) and DMEA (Ken Atchley).
- We are able to take field trips to a variety of regional generating plants: Redland's Water and Power (hydro-plant), Delta Municipality (diesel plant), Grand Valley Power Transmission substation and Solar powered substation. These opportunities are rare in other programs.
- Site Map for future complex (see appendix G)

- **Weaknesses**

- Budget monies to equip our students with at least two new fall restraints
- Budget to replace poles yearly. Grant funding no longer can be used
- Newer digger derrick, bucket truck, underground equipment, and fault locating equipment. In the workforce, there might be less climbing, because of the increased amount of energized work.
- No Computer Lab for CBT safety seminars, map reading, and general campus requirements.
- Space for individual working labs. This would be a great benefit for our transformer connections class.
- An indoor climbing/short pole facility in case of inclement weather.

- **Trends**

- The industry is moving towards less climbing and more bucket operation. This alleviates the exposure to free climbing accidents.
- Smart grid of the future and the computerization of the grid. Training will be required for the future.
- More underground

- **Additional information**

We are optimistic that we can move to a new facility in the near future and build a state of the art training facility from scratch. Our industry partners are enthusiastic about this move and are providing input on fields and layout as well as, donations of material will increase the transition as clean as possible.

This facility would need:

- 3 classrooms with computer labs and internet access.
- Student commons area and locker room.
- Four truck bays with 16 ft. high doors.
- Warehouse area for storage of line building equipment.
- 8 to 12 poles inside for transformer connections and climbing practice in case of inclement weather.
- Room for metering and transformer /service connections.
- Offices for a staff of 3 to 5 including CDL instructor.
- Two areas with 12 foot roll up doors for incoming demonstrations from Industry.
- Building usage during year: 32 weeks for WCCC Lineworker Program 2 to 3 weeks for Mesa Hotline School The rest of the year would be open the industry for Training schools. Like Xcel Energy, IBEW, Sturgeon Electric, Par Electric, Ward Electric, CREA, and the Union Pacific Railroad.
- Overhead field to occupy an area 500 to 600 ft. by 700 to 800 ft. To consist of 3 to 5 single phase line 5 to 10 poles long. 8 to 10 three phase lines 5 to 10 poles long. Lines to include tangent poles, angle poles, arm and armless construction, dead-end and transformer poles. Total Poles 30' to 50' 125, 50'+ 25.
- Underground field to occupy a 200' x 200' area. With transformer and switch cabinets connected by an underground duct system. Also, a 100'x100' dirt area to dig holes and trenches, to be able pull conduit for demonstration purposes with new truck and trenchers that come to hotline school for demonstration.
- Keep working toward having two classes of 30 students with an Instructor and an assistant per class.

Appendix A

Course Descriptions

ELCL 120 - Fundamentals of Electricity

Generation, transmission, and distribution of electricity beginning with the electron and its function of transporting electric power to homes and industry.

4.000 Credit hours

4.000 Lecture hours

Levels: Undergraduate

Schedule Types: Lecture

Trade/Industrial Occup Division

WCCC-Mfg. & Industrial Services Department

ELCL 125 - Job Training and Safety

Covers first aid, CDL, basic use and care of personal protective equipment use and care of climbing equipment, daily inspection and basic use of motorized equipment.

2.000 Credit hours

2.000 Lecture hours

Levels: Undergraduate

Schedule Types: Lecture

WCCC-Mfg. & Industrial Services Department

ELCL 131 - Electrical Distribution Theory I

Pole setting techniques, framing methods and specifications, climbing, sagging and splicing of conductors, energizing and de-energizing of lines, and installation of protective grounds.

4.000 Credit hours

4.000 Lecture hours

Levels: Undergraduate

Schedule Types: Lecture

Trade/Industrial Occup Division

WCCC-Mfg. & Industrial Services Department

ELCL 131L - Electric Distribution Lab

Examination of the National Electric Safety Code, equipment operation, material records, knot tying, installation of protective grounds, pole climbing, replace insulators, replacing crossarms, conductor ties, and overhead line construction.

4.000 Credit hours

8.000 Lab hours

Levels: Undergraduate

Schedule Types: Laboratory

WCCC-Mfg. & Industrial Services Department

ELCL 132 - Electrical Distribution Theory II

Installation and operation of protective equipment, transformer hookups, voltage regulation, hotstick maintenance, troubleshooting, and gloving from the pole. Four hours lecture, three hours laboratory per week. Prerequisite: ELCL 131.

4.000 Credit hours

4.000 Lecture hours

Levels: Undergraduate

Schedule Types: Lecture

Trade/Industrial Occup Division

WCCC-Mfg. & Industrial Services Department

ELCL 132L - Electrical Distribution Theory II Laboratory

Installation and operation of protective equipment, transformer hookups, voltage regulation, hotstick maintenance, troubleshooting, and gloving from the pole. Four hours lecture, three hours laboratory per week. Prerequisite: ELCL 131.

2.000 Credit hours

3.000 Lab hours

Levels: Undergraduate

Schedule Types: Laboratory

Trade/Industrial Occup Division

WCCC-Mfg. & Industrial Services Department

ELCL 137 - Advanced Electrical Distribution

Meter safety, connector installation, street lighting, rubber cover up, and public relations. Two hours lecture, eight hours laboratory per week. Prerequisite: ELCL 136L.

2.000 Credit hours

2.000 Lecture hours

Levels: Undergraduate

Schedule Types: Lecture

Trade/Industrial Occup Division

WCCC-Mfg. & Industrial Services Department

ELCL 137L - Advanced Electrical Distribution Laboratory

Meter safety, connector installation, street lighting, rubber cover up, and public relations. Two hours lecture, eight hours laboratory per week. Prerequisite: ELCL 136L.

4.000 Credit hours

6.000 Lab hours

Levels: Undergraduate

Schedule Types: Laboratory

Trade/Industrial Occup Division

WCCC-Mfg. & Industrial Services Department

ELCL 140 - Underground Procedures

Safety practices, terminology, fault finding, cable locating, switching procedure, installation of terminal devices, splicing, and transformer application. Five hours lecture, four hours laboratory per week.

4.000 Credit hours

4.000 Lecture hours

Levels: Undergraduate

Schedule Types: Lecture

Trade/Industrial Occup Division

WCCC-Mfg. & Industrial Services Department

ELCL 140L - Underground Procedures Laboratory

Safety practices, terminology, fault finding, cable locating, switching procedure, installation of terminal devices, splicing, and transformer application. Five hours lecture, four hours laboratory per week.

2.000 Credit hours

3.000 Lab hours

Levels: Undergraduate

Schedule Types: Laboratory

Trade/Industrial Occup Division

WCCC-Mfg. & Industrial Services Department

ELCL 145 - Hot Line Procedures

Two weeks of training by outside specialists covering current hotline maintenance and underground installation methods. Eight hours lecture, twenty-four hours laboratory per week.

1.000 Credit hours

1.000 Lecture hours

Levels: Undergraduate

Schedule Types: Lecture

Trade/Industrial Occup Division

WCCC-Mfg. & Industrial Services Department

ELCL 145L - Hot Line Procedures Laboratory

Two weeks of training by outside specialists covering current hotline maintenance and underground installation methods. Eight hours lecture, twenty-four hours laboratory per week.

2.000 Credit hours

3.000 Lab hours

Levels: Undergraduate

Schedule Types: Laboratory

Trade/Industrial Occup Division

WCCC-Mfg. & Industrial Services Department

ELCL 195 - Independent Study

1.000 OR 2.000 Credit hours

2.000 OR 4.000 Other hours

Levels: Undergraduate

Schedule Types: Independent Study

Trade/Industrial Occup Division

WCCC-Mfg. & Industrial Services Department

ELCL 196 - Topics

1.000 OR 2.000 Credit hours

1.000 OR 2.000 Lecture hours

Levels: Undergraduate

Schedule Types: Lecture

Trade/Industrial Occup Division

WCCC-Mfg. & Industrial Services Department

ELCL 199 - Internship

Opportunity for an individual to be employed for training by a utility company while maintaining his/her status as a Colorado Mesa University student. Provides excellent on-the-job training benefits. Students usually selected for this course by formal interview. Prerequisite: consent of instructor. Eighteen hours per week, two semesters after completion of regular program.

6.000 Credit hours

18.000 Other hours

Levels: Undergraduate

Schedule Types: Intern/Practicum/Real Work Expr

Trade/Industrial Occup Division

WCCC-Mfg. & Industrial Services Department

Look-Up Classes to Add:

Fall 2013
Jan 26, 2014 10:54 am

 By Registering for class, you are obligated to pay, regardless of attendance, unless the course is officially dropped before the first day of class.

To register for classes, check the box in front of the CRN (C identifies a closed class) and click Register or Add to Worksheet. Classes with co-requisites (course & tab) must have both components checked to register.

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- [Course Descriptions](#)

[Additional Registration Information](#) - Dates/deadlines; tuition and other expenses; program sheets; general education lists; catalog; course descriptions; and more.

Sections Found
Electric Lineworker

Select	CRN	Subj	Crse	Sec	Cmp	Cred	Title	Days	Time	Cap	Act	Rem	WL	WL	WL	XL	XL	XL	Instructor	Date (MM/DD)	Location	Attribute	Fees	Permission Required
C	20073	ELCL	120	001	8	4.000	Fundamentals of Electricity I	MTWR	10:30 am-11:20 am	14	15	-1	10	0	10	0	0	0	Patrick Roark (P)	08/19-12/12	IETC			Yes
C	22321	ELCL	120	002	8	4.000	Fundamentals of Electricity	MTWR	11:30 am-12:20 pm	14	14	0	10	0	10	0	0	0	Patrick Roark (P)	08/19-12/12	IETC			
C	20228	ELCL	125	001	8	2.000	Job Training and Safety	MTWRF	09:40 am-10:05 am	14	15	-1	10	0	10	0	0	0	Patrick Roark (P)	08/19-12/12	IETC			Yes
C	22322	ELCL	125	002	8	2.000	Job Training and Safety	MTWRF	01:00 pm-01:25 pm	14	14	0	10	0	10	0	0	0	Paul Behl (P)	08/19-12/12	IETC			
C	20074	ELCL	131	001	8	4.000	Elect Distribution Theory I	MTWRF	07:00 am-07:50 am	14	15	-1	10	0	10	0	0	0	Patrick Roark (P)	08/19-12/12	IETC			Yes
C	20918	ELCL	131	002	8	4.000	Electrical Distribution Theory I	MTWRF	01:30 pm-02:20 pm	14	14	0	10	0	10	0	0	0	Paul Behl (P)	08/19-12/12	IETC			Yes
C	20980	ELCL	131L	001	8	4.000	Electric Distribution Lab	MTWRF	08:00 am-09:30 am	14	15	-1	10	0	10	0	0	0	Patrick Roark (P)	08/19-12/12	IETC			Yes
C	20979	ELCL	131L	002	8	4.000	Electric Distribution Lab	MTWRF	02:30 pm-04:00 pm	14	14	0	10	0	10	0	0	0	Paul Behl (P)	08/19-12/12	IETC			

[New Search](#)

RELEASE: 8.5.2.1 MC:12.0

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Look-Up Classes to Add:

Spring 2014 (Includes J-Term)
Jan 26, 2014 10:54 am



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Sections Found

Electric Lineworker

Select	CRN	Subj	Crse	Sec	Cmp	Cred	Title	Days	Time	Cap	Act	Rem	WL	WL	WL	XL	XL	XL	Instructor	Date	Location	Attribute	Fees	Permission
													Cap	Act	Rem	Cap	Act	Rem		(MM/DD)				Required
<input type="checkbox"/>	46133	ELCL	132	001	8	4.000	Electrical Distribution Theory II	MTWR	07:00 am-07:50 am	8	13	-5	0	0	0	0	0	0	Paul Behl (P)	01/21-05/15	IETC			Yes
<input type="checkbox"/>	47297	ELCL	132	002	8	4.000	Electrical Distribution Theory II	MTWR	10:00 am-10:50 am	8	12	-4	0	0	0	0	0	0	Patrick Roark (P)	01/21-05/15	IETC			Yes
<input type="checkbox"/>	46134	ELCL	132L	001	8	2.000	Electrical Distribution Theory II Laboratory	MT	09:00 am-10:35 am	8	13	-5	0	0	0	0	0	0	Paul Behl (P)	01/21-05/15	IETC			Yes
<input type="checkbox"/>	47298	ELCL	132L	002	8	2.000	Electrical Distribution Theory II Laboratory	MT	12:30 pm-02:00 pm	8	12	-4	0	0	0	0	0	0	Patrick Roark (P)	01/21-05/15	IETC			Yes
<input type="checkbox"/>	46135	ELCL	137	001	8	2.000	Advanced Electrical Distribution	F	07:00 am-08:50 am	8	13	-5	0	0	0	0	0	0	Paul Behl (P)	01/21-05/15	IETC			Yes
<input type="checkbox"/>	47299	ELCL	137	002	8	2.000	Advanced Electrical Distribution	F	10:00 am-11:50 am	8	12	-4	0	0	0	0	0	0	Patrick Roark (P)	01/21-05/15	IETC			Yes
<input type="checkbox"/>	46136	ELCL	137L	001	8	4.000	Advanced Electrical Distribution Laboratory	MTWR	10:45 am-12:20 pm	8	13	-5	0	0	0	0	0	0	Paul Behl (P)	01/21-05/15	IETC			Yes
<input type="checkbox"/>	47300	ELCL	137L	002	8	4.000	Advanced Electrical Distribution Laboratory	MTWR	02:00 pm-04:20 pm	8	12	-4	0	0	0	0	0	0	Patrick Roark (P)	01/21-05/15	IETC			Yes
<input type="checkbox"/>	46137	ELCL	140	001	8	4.000	Underground Procedures	MTWR	08:00 am-08:50 am	8	13	-5	0	0	0	0	0	0	Paul Behl (P)	01/21-05/15	IETC			Yes
<input type="checkbox"/>	47301	ELCL	140	002	8	4.000	Underground Procedures	MTWR	11:00 am-11:50 am	8	12	-4	0	0	0	0	0	0	Patrick Roark (P)	01/21-05/15	IETC			Yes
<input type="checkbox"/>	46138	ELCL	140L	001	8	2.000	Underground Procedures Laboratory	F	09:00 am-12:20 pm	8	13	-5	0	0	0	0	0	0	Paul Behl (P)	01/21-05/15	IETC			Yes
<input type="checkbox"/>	46832	ELCL	140L	002	8	2.000	Underground Procedures Laboratory	F	12:30 pm-02:00 pm	8	12	-4	0	0	0	0	0	0	Patrick Roark (P)	01/21-05/15	IETC			Yes
<input type="checkbox"/>	46139	ELCL	145	001	8	1.000	Hot Line Procedures	MTWRF	08:00 am-05:00 pm	20	25	-5	0	0	0	0	0	0	Patrick Roark (P), Paul Behl	05/05-05/15	IETC			Yes
<input type="checkbox"/>	46140	ELCL	145L	001	8	2.000	Hot Line Procedures Laboratory	MTWRF	08:00 am-05:00 pm	20	25	-5	0	0	0	0	0	0	Patrick Roark (P), Paul Behl	05/05-05/15	IETC			Yes

RELEASE: 8.5.2.1 MC:12.0

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WCCC Enrollment Numbers
07-Present

PROGRAM	Fall 07	Spr 08	Fall 08	Spr 09	Fall 09	Spr 10	Fall 10	Spr 11	Fall 11	Spr 12	Fall 12	Spr 13 (1/14/13)
AGRS											63	138
CADT	425	429	427	297	258	276	164	196	202	254	174	149
CONC	276	168	331	243	339	305	394	311	334	343	295	253
CRJW & CRMJ	560	630	735	700	665	840	578	798	602	600	862	591
CUAR	743	697	714	724	1007	1074	1208	1070	1498	1378	1242	1021
EDEC				137	217	372	310	383	260	406	344	292
EDUT									19	182	80	0
ELCL	433	567	294	315	728	966	480	588	238	315	392	483
FSWM								2		0		0
MAMT	275	221	289	261	257	237	287	242	247	339	362	324
MATH 107 & 108	160	4	160	0	284	32	112	28	92	44	320	209
MGDA			81	54	111	210	225	258	279	204	294	201
MOAP									265	415	237	329
NURA				168	146	174	80	180	73	50	90	65
OFAD	312	295	222	248	355	321	397	352	402	362	482	336
PROS	27	88	69	144	176	124	196	192	173	187	124	96
REEB			84									
TECI	276	202	172	292	179	313	213	422	270	358	292	281
TSTA	27	74	39	96	57	158	79	164	57	142	114	130
TSTC	161	56	179	83	187	211	368	346	261	292	471	121
TSTD	23	17	44	48	38	65	65	100	86	66	60	80
TSTG	60	82	29	92	95	203	256	369	297	218	198	202
UTEC	226	203	232	191	224	72	380	136	216	112		
WELD	143	134	121	240	191	281	202	323	237	310	429	333
WQMS							30	15	3		15	30
TOTAL	4127	3867	4222	4333	5514	6234	6024	6475	6111	6577	6940	5664
ENGL	1156	550	971	685	1347	990	1872	1319	2155	1221	2053	677
MATH	2325	1840	2204	2028	2789	2514	3349	3107	4566	3975	5081	3557
READ	395	81	287	81	334	205	473	343	906	408	1088	279
TOTAL	3876	2471	3462	2794	4470	3709	5694	4769	7627	5604	8222	4513
GRAND TOTAL	8003	6338	7684	7127	9984	9943	11718	11244	13738	12181	15162	10177

Credit Hours by Faculty
Electric Lineworker

Colorado Mesa University

Subject	Faculty Type	Type			2007-08			2008-09			2009-10			2010-11			2011-12		
		CCH	SCH	%SCh	CCH	SCH	%SCh	CCH	SCH	%SCh	CCH	SCH	%SCh	CCH	SCH	%SCh			
ELCL	3-FT NonTT	46	1000	100%	35	609	100%	63	1602	95%	59	928	87%	61	553	100%			
	6-PT							4	92	5%	8	140	13%						
ELCL Total		46	1000	100%	35	609	100%	67	1694	95%	67	1068	100%	61	553	100%			

Credit Hour Production,
AY 2007-08-2011-12

Dept.		WCCC		2007-08			2008-09			2009-10			2010-11			2011-12			5 Year Average		
Course	Title	Cr Hr	Sections	Enrolled	SCH	Sections	Enrolled	SCH	Sections	Enrolled	SCH	Sections	Enrolled	SCH	Sections	Enrolled	SCH	Sections	Enrolled	SCH	
ELCL																					
120	Fundamentals of Electricity I	4	1	28	112	1	21	84	2	52	208	2	35	140	1	17	68	1	31	122	
125	Job Training & Safety	2	2	28	56	1	21	42	2	52	104	2	34	68	1	17	34	2	30	61	
131	Elect. Distribution Theory I	4	2	28	112	1	21	84	2	52	208	2	34	136	2	17	68	2	30	122	
131L	Elect. Distribution Lab	4	2	28	112	1	21	84	2	52	208	2	34	136	2	17	68	2	30	122	
132	Elect. Distribution Theory II	4	1	27	108	1	15	60	2	46	184	2	28	112	2	15	60	2	26	105	
132L	Elect. Distribution Theory Lab	2	1	27	54	1	15	30	2	46	92	2	28	56	2	15	30	2	26	52	
137	Adv. Electrical Distribution	2	1	27	54	1	15	30	2	46	92	2	28	56	2	15	30	2	26	52	
137L	Adv. Electrical Distribution Lab	4	1	27	108	1	15	60	2	46	184	2	28	112	2	15	60	2	26	105	
140	Underground Procedures	4	1	27	108	1	15	60	2	46	184	2	28	112	2	15	60	2	26	105	
140L	Underground Procedures Lab	2	1	27	54	1	15	30	2	46	92	2	28	56	2	15	30	2	26	52	
145	Hot Line Procedures	1	1	27	27	1	15	15	1	46	46	1	28	28	1	15	15	1	26	26	
145L	Hot Line Procedures Lab	2	1	27	54	1	15	30	1	46	92	1	28	56	1	15	30	1	26	52	
196	Topic	1	1	41	41													1	41	41	
ELCL Total			16	369	1000	12	204	609	22	576	1694	22	361	1068	20	188	553	22	370	1017	

Appendix B

Faculty

Name:

Patrick A Roark

Start Year: 2005

Program:

Manufacturing & Industrial Services

Department:

Electric Lineworker

Highest Degree



Lecturer Vita

Institution

Discipline

Year

Education: (List all degrees beginning with most recent-include post docs and external certificates)

Teaching 2003-Present:

- Courses Taught Fundamentals of Electricity ELCL 120
- Job Training and Safety ELCL 125
- Electric Distribution Theory ELCL 131 ELCL 131L
- Electric Distribution Lab ELCL 131L
- Electrical Distribution Theory II ELCL 132
- Electrical Distribution Theory II Laboratory ELCL 132L
- Advanced Electrical Distribution ELCL 137
- Advanced Electrical Distribution Laboratory ELCL 137L
- Underground Procedures ELCL 140
- Underground Procedures Laboratory ELCL 140L

Evidence of Continuous Improvement

- WCCC -- MATH 107 Career Mathematics -2013
- WCCC- CAD 108 2010
- WCCC ELCL120 Fundamentals of Electricity 2010
- WCCC Excel 2007 Basic 2011

Innovative Materials/Activities

Supervision of Student Research/Project(s)

Prior Professional Experience Relevant to Current Position: (Include year(s) of employment, employer, position title and responsibilities)

Year(s) of Employment	Employer	Position Title	Position Responsibilities
1975/ 2005	Y-W Electric Assn. Inc	Electric lineman	Forman

Served 4 year apprenticeship in a two man service area. Responsible for the operation of 3 substations in an area of heavy concentration of 3 phase irrigation residential services in and around a small town. Trouble shot outages on substations and rest of system. Responsibilities include live line maintenance and construction of overhead lines with hot sticks. 1993 went to rubber gloving instead of hot sticking. Also, building overhead line cold. Maintaining OCRS, regulators, and capacitors in substation and on lines.

2005-Present: Instructor Western Colorado Community College 2508 Blichmann Ave, Grand Junction CO 81505

Responsible for beginning education of pre-apprenticeship in electric line work.

Please record the number "items/events" you have listed above in the following categories.

If you specify items/events under "other," please provide an explanation/definition.

Books	Book Reviews	Creative Publications
Journal Articles	Performances	Patents
Conference Presentations	Exhibitions	Grants-funded and non-funded
Sabbaticals	Fulbrights	Book Chapters
Other (related to discipline)	<input type="text"/>	

Name:

Paul E Behl, Jr.

Start Year: 2010

Program:

Electric Lineworker

Department:

WCCC - Manufacturing & Industrial Services

Faculty Rank

- Technical Professor
- Assistant Technical Professor
- Associate Technical Professor
- Technical Instructor



Full-time Faculty Vita

Highest Degree

AAS Institution: Richland Community College Discipline: Electric Utility Technology Year: 2010

Education: (List all degrees beginning with most recent-include post docs and external certificates)

- Electrical Utility Technology Certificate (2009)
- American Line Builder's Apprenticeship & Training (2001) Journeyman's ticket
- Eureka High School Diploma (1995)

Teaching 2003-Present:

Courses Taught:

- ELCL 120 Fundamentals of Electricity (2012)
- ELCL 131 Electrical Distribution Theory I (2012)
- ELCL 131L Electrical Distribution Lab (2011,2012)
- ELCL 132 Electrical Distribution Theory II (2011,2012)
- ELCL 132L Electrical Distribution Lab (2011,2012)
- ELCL 137 Advanced Electrical Distribution (2011,2012)
- ELCL 137L Advanced Electrical Distribution (2011,2012)
- ELCL 140 Underground Procedures (2011,2012)
- ELCL 140L Underground Procedures Lab (2011,2012)
- ELCL 145 Hot Line Procedures (2011,2012)
- ELCL 145L Hot Line Procedures (2011,2012)
- UTEC 107 Mathematics for the Trades (2012)

Evidence of Continuous Improvement

- EDUT 250 (Credential class)
- EDUT 260 (Credential class)
- Excel (continuing education computer software)
- CPR/ First aid certified

Innovative Materials/Activities

Collegiate Line Worker Rodeo (Chandler, AZ) 2011

Supervision of Student Research/Project(s)

Lineworker Alumni (student organization) 2012

Scholarship and Creative Work, 2003-Present:

Journal Articles

Conference Presentations

Technical Reports

Exhibits

Grants (proposed or funded)

Professional Memberships

International Brotherhood of Electrical Workers (IBEW) local 51
Federal Communications Commission (FCC) 1993

Honors and Awards

International Lineman's Rodeo participant (1999-2001)

Service 2003-Present:

Institutional

Chairman Safety Committee (2008-2010)
Executive Board (IBEW) (2008-2010)
Executive Committee (IBEW) (2003-2005)

Community

Advising 2003-Present:

Institutional level

Department level:

Instructor

Prior Professional Experience Relevant to Current Position: (Include year(s) of employment, employer, position title and responsibilities)

Year(s) of Employment	Employer	Position Title	Position Responsibilities
1997 - Present	International Brotherhood of Electrical Workers (IBEW)	Journeyman Lineman	build transmission & distribution lines
2006 - 2010	Ameren	Journeyman Lineman Troubleman	repair and construct power lines trouble shoot power problems

Please record the number "items/events" you have listed above in the following categories.

If you specify items/events under "other," please provide an explanation/definition.

Books	Book Reviews	Creative Publications
Journal Articles	Performances	Patents
Conference Presentations	Exhibitions	Grants-funded and non-funded
Sabbaticals	Fulbrights	Book Chapters
Other (related to discipline)		

Appendix C

Financials

Account Activity

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Grand Valley BOCES

Date Range: 7/1/2007 to 6/30/2008

Account		Current Account Values		Current Budget Totals		Next Year Budget(s)	
Description	Supplies/Mat-Elineworker	Balance Start of Month	4,353.34	Budget	5,950.00 b	Budget	0.00
Account Number	10-499-10-1041-0600-000-0000-2	Current Month	0.00	Budget Balance	1,596.66 b-a	Budget Proposed	5,950.00
ASN Number	10100510013	Current Years Balance	4,353.34 a	Encumbrance	0.00 c	Budget Approved	0.00
		Activity for Date Range	\$5,836.21	Next Mo. Bills	\$0.00 d		
				Ecumb. Balance	\$1,596.66 b-(a+c+d)		

Acc'ts Payable	Batch #	Expensed	Amount	Check#	Check	Vendor Name	PO Number	Invoice#	Invoice
Lunch/Pickup new truck	718	07/17/2007	11.04	13044	07/17/2007	Roark, Pat		230	7/7/07
Trucks for sale	718	07/17/2007	171.80	13032	07/17/2007	Daily Sentinel		07060591	6/30/07
Pick up new truck	815	08/21/2007	49.01	13093	08/21/2007	Conoco Inc.		101841	7/7/00
Pick up new truck	815	08/21/2007	52.19	13093	08/21/2007	Conoco Inc.		172227	7/7/07
Pick up new truck	815	08/21/2007	135.00	13093	08/21/2007	Conoco Inc.		152706	7/7/07
Electricity, Transformer, Lineman	912	09/19/2007	205.70	13184	09/19/2007	Mesa State College		10068272	8/21/07
Guidebook for Lineman	912	09/19/2007	52.44	13160	09/19/2007	Card Services-Business Card		2156335	8/22/07
Business Cards - Roark	912	09/19/2007	29.31	13191	09/19/2007	Pyramid Printing Inc.		49549	8/24/07
Gas for Rental Car in K.C. for Lineman	1212	12/18/2007	29.00	13415	12/18/2007	Conoco Inc.		152119	10/28/07
Keep	1212	12/18/2007	2.78	13408	12/18/2007	Card Services-Business Card		6100	11/16/07
First Aid & CPR Traing	1212	12/18/2007	350.00	13414	12/18/2007	Clark, Tricia		D10107	10/1/07
Pins	116	01/19/2008	1.56	13466	01/19/2008	Bookcliff Auto Parts		357901	12/17/07
Wraplock ACSR 6-1	116	01/19/2008	76.06	13502	01/19/2008	Western United Supply	0000000053	108592-02	12/27/07
Wraplock ACSR 6-1	116	01/19/2008	3,069.45	13502	01/19/2008	Western United Supply	0000000053	1085982-01	12/27/07
Fuel to Look at Digger Truck	213	02/19/2008	33.00	13545	02/19/2008	Conoco Inc.		220820	1/19/08
Diesel Fuel 44.13 Gal	213	02/19/2008	150.00	13545	02/19/2008	Conoco Inc.		123918	2/4/08
Temp Plates for Digger	326	03/26/2008	6.22	13668	03/26/2008	Petty Cash		D3708	3/7/08
Fuel to bring back New Digger	409	04/10/2008	43.50	13694	04/10/2008	Conoco Inc.		125034	3/14/08
Fuel to Bring Back New Digger	409	04/10/2008	71.00	13694	04/10/2008	Conoco Inc.		093103	3/12/08
Fuel to Bring Back New Digger	409	04/10/2008	26.00	13694	04/10/2008	Conoco Inc.		135038	3/12/08
Fuel To Bring Back New Digger	409	04/10/2008	150.00	13694	04/10/2008	Conoco Inc.		093220	3/12/08
Fuel to Bring Back New Digger	409	04/10/2008	39.52	13694	04/10/2008	Conoco Inc.		093701	3/12/08
Fuel to bring Back New Digger	409	04/10/2008	37.00	13694	04/10/2008	Conoco Inc.		134916	3/12/08
Fuel to bring Back New Digger	409	04/10/2008	75.00	13694	04/10/2008	Conoco Inc.		165322	3/12/08
Diesel Fuel	625	06/25/2008	150.00	13874	06/25/2008	Conoco Inc.		122249	4/30/06
WAgons	630	06/30/2008	251.96	13898	06/30/2008	Card Services-Business Card		414653	6/27/08
Total Acct's Payable			\$5,268.54						

Cash Receipt	Batch #	Received	Amount	Receipt#	Receipt	Vendor Name	PO Number	Invoice#	Invoice
Z. Witt/CPR	13	11/12/2007	(15.00)	137792					
J. Northrup/CPR	13	11/12/2007	(15.00)	137791					

Account Activity

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Grand Valley BOCES

Date Range: 7/1/2007 to 6/30/2008

Account		Current Account Values		Current Budget Totals		Next Year Budget(s)	
Description	Supplies/Mat-Elineworker	Balance Start of Month	4,353.34	Budget	5,950.00 b	Budget	0.00
Account Number	10-499-10-1041-0600-000-0000-2	Current Month	0.00	Budget Balance	1,596.66 b-a	Budget Proposed	5,950.00
ASN Number	10100510013	Current Years Balance	4,353.34 a	Encumbrance	0.00 c	Budget Approved	0.00
		Activity for Date Range	\$5,836.21	Next Mo. Bills	\$0.00 d		
				Ecumb. Balance	\$1,596.66 b-(a+c+d)		

Cash Receipt	(Continued)	Batch #	Received	Amount	Receipt#	Receipt	Vendor Name	PO Number	Invoice#	Invoice
R. Keith/CPR		13	11/12/2007	(15.00)	137790					
K. Jones/CPR		13	11/12/2007	(15.00)	137794					
B. Meyers/CPR		13	11/12/2007	(15.00)	137793					
T. Lockwood/CPR		13	11/12/2007	(15.00)	137789					
J. Holman/CPR		13	11/14/2007	(15.00)	137798					
G. Vanaken/CPR		13	11/14/2007	(15.00)	137797					
A. Anderson/CPR		13	11/14/2007	(15.00)	137796					
N. Towne/CPR		13	11/14/2007	(15.00)	137799					
J. Hart/CPR		13	11/14/2007	(15.00)	137800					
M. Bradburn/CPR		13	11/16/2007	(15.00)	296703					
T. Rodgers/CPR		13	11/16/2007	(15.00)	296702					
J. Hirning/CPR		13	11/16/2007	(15.00)	296701					
J. Soar/CPR		13	11/19/2007	(15.00)	296704					
B. Paulson/CPR		13	11/20/2007	(15.00)	296705					
K. Yeomans/Cpr		13	11/26/2007	(15.00)	296706					
M. Lewis/CPR		13	11/28/2007	(15.00)	296707					
A. Timmins/ CPR		13	12/05/2007	(15.00)	296708					
D. Caldwell/CPR		13	12/06/2007	(15.00)	296709					
Total Cash Receipt				\$300.00						

Only Web 5 Activity for Date Range (\$300.00)

Journal Source:Prior Yrs	Batch #	Posted	Amount	Transaction#	Vendor Name	PO Number	Invoice#	Invoice
Copier charges 7/07	31	07/31/2007	0.72	3				
Copier charges 4/07	31	07/31/2007	1.92	3				
Copier charges 7/07	31	07/31/2007	219.56	3				
Copier Charges 8/07	12	09/12/2007	196.60	31				
Copier Charges 9/07	2	10/02/2007	30.95	38				
Copier Charges 10/07	30	10/30/2007	98.40	55				
Copier Charges 11/07	6	12/06/2007	188.10	82				
Copier Charges 12/07	17	01/17/2008	56.86	113				
Copier Charges 1/08	31	01/31/2008	2.02	124				
Postage Costs 2/08	6	03/06/2008	5.00	159				

Account Activity

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Grand Valley BOCES

Date Range: 7/1/2007 to 6/30/2008

Account		Current Account Values		Current Budget Totals		Next Year Budget(s)	
Description	Supplies/Mat-Elineworker	Balance Start of Month	4,353.34	Budget	5,950.00 b	Budget	0.00
Account Number	10-499-10-1041-0600-000-0000-2	Current Month	0.00	Budget Balance	1,596.66 b-a	Budget Proposed	5,950.00
ASN Number	10100510013	Current Years Balance	4,353.34 a	Encumbrance	0.00 c	Budget Approved	0.00
		Activity for Date Range	\$5,836.21	Next Mo. Bills	\$0.00 d		
				Ecumb. Balance	\$1,596.66 b-(a+c+d)		

Journal Source:Prior Yrs(Continued)	Batch #	Posted	Amount	Transaction#	Vendor Name	PO Number	Invoice#	Invoice
Copier Charges 2/08	6	03/06/2008	14.04	156				
Petty cash/Lineman truck registration	6	03/06/2008	10.74	151				
Copier Charges 3/08	2	04/02/2008	9.76	174				
Copier Charges 4/08	7	05/07/2008	23.00	188				
Copier charges 5/08	2	06/02/2008	10.00	208				

Total Journal Source:Prior Yrs **\$867.67**

Activity for Date Range: 7/1/2007 to 6/30/2008 **\$5,836.21**

Account Activity

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Grand Valley BOCES

Date Range: 7/1/2008 to 6/30/2009

Account		Current Account Values		Current Budget Totals		Next Year Budget(s)	
Description	Supplies/Mat-Elineworker	Balance Start of Month	4,353.34	Budget	5,950.00 b	Budget	0.00
Account Number	10-499-10-1041-0600-000-0000-2	Current Month	0.00	Budget Balance	1,596.66 b-a	Budget Proposed	5,950.00
ASN Number	10100510013	Current Years Balance	4,353.34 a	Encumbrance	0.00 c	Budget Approved	0.00
				Next Mo. Bills	\$0.00 d		
				Ecumb. Balance	\$1,596.66 b-(a+c+d)		

Acct's Payable	Batch #	Expensed	Amount	Check#	Check	Vendor Name	PO Number	Invoice#	Invoice
Digger truck plates, renewal	9729	07/29/2008	10.91	9651	07/29/2008	Mesa County Clerk		D72908	7/29/08
Keys for new digger truck	814	08/14/2008	6.25	13971	08/14/2008	Simmons Lock & Key		219989	7/29/08
Chain, hammer lock	910	09/11/2008	141.64	14019	09/11/2008	Card Services-Business Card		164616	9/3/08
Electric Lineworker decals	910	09/11/2008	83.12	14027	09/11/2008	Impact Promotions		20740	8/29/08
First aid supplies	1008	10/14/2008	55.59	14110	10/14/2008	RESPOND First Aid Systems		9281	9/29/08
Mesh Deck Wagons	1112	11/12/2008	149.98	14163	11/12/2008	Card Services-Business Card		10792	10/1/08
Admin fee	114	01/12/2009	119.00	14297	01/12/2009	American Red Cross		1109	11/30/08
Rebuilt Tamp	211	02/12/2009	756.15	14396	02/12/2009	Quest Inc.	0000000057	22862	1/28/09
P. Roark business cards	225	02/24/2009	27.15	14420	02/24/2009	Peczuh Printing Company		921191	1/29/09
Lunch for advisory committee meeting	225	02/24/2009	78.54	14424	02/24/2009	Roark, Pat		2913	2/16/09
Truck parts	311	03/11/2009	22.46	14439	03/11/2009	Bookcliff Auto Parts		659630	2/26/09
Tie wraplock, tie wire	311	03/11/2009	467.18	14476	03/11/2009	Western United Supply	0000000060	1096493-0	2/19/09
Terminals and tape	311	03/11/2009	16.44	14439	03/11/2009	Bookcliff Auto Parts		644486	2/4/09
Diesel fuel	311	03/11/2009	140.00	14447	03/11/2009	Conoco Inc.		D3309	3/3/09
2 batteries for digger trucks	311	03/11/2009	189.90	14439	03/11/2009	Bookcliff Auto Parts		644411	2/4/09
1/0 wraplock ties	325	03/31/2009	779.69	14518	03/31/2009	Western United Supply	0000000060	1096493-02	3/23/09
Fuel	408	04/15/2009	19.00	14532	04/15/2009	Card Services-Business Card		957142	3/19/09
Fabricate racks for wagons	408	04/15/2009	230.00	14539	04/15/2009	Grand Valley BOCES-SBA		D4909	4/9/09
Hydraulic fitting	513	05/13/2009	47.68	14609	05/13/2009	Card Services-Business Card		115007	4/20/09
Trailer tire	513	05/13/2009	96.83	14609	05/13/2009	Card Services-Business Card		67942	4/14/09
Hydraulic fluid cleaner	513	05/13/2009	66.75	14606	05/13/2009	Bookcliff Auto Parts		695170	4/21/09
Fuel	610	05/20/2009	15.00	14698	06/15/2009	Conoco Inc.		125259	5/18/09
Fuel	610	05/20/2009	20.01	14698	06/15/2009	Conoco Inc.		080702	5/20/09
Fuel	610	05/20/2009	20.00	14698	06/15/2009	Conoco Inc.		08002	6/1/09
Fuel	610	05/20/2009	175.00	14698	06/15/2009	Conoco Inc.		131549	6/1/09
Laptop battery	520	05/21/2009	84.00	14677	05/21/2009	Toshiba Direct	0000000097	3141934	5/21/09
Diesel	610	06/15/2009	130.02	14698	06/15/2009	Conoco Inc.		081148	5/11/09
Pick up digger truck/fuel	630	06/30/2009	46.57	14811	06/30/2009	Card Services-Business Card		153926	6/30/09
Pick up digger truck/lunch, dinner	630	06/30/2009	30.27	14812	06/30/2009	Petty Cash		D62909	6/30/09
Pick up digger truck/dinner	630	06/30/2009	6.55	14812	06/30/2009	Petty Cash		D62909	6/30/09

03

Account Activity

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Grand Valley BOCES

Date Range: 7/1/2008 to 6/30/2009

Account		Current Account Values		Current Budget Totals		Next Year Budget(s)	
Description	Supplies/Mat-Elineworker	Balance Start of Month	4,353.34	Budget	5,950.00 b	Budget	0.00
Account Number	10-499-10-1041-0600-000-0000-2	Current Month	0.00	Budget Balance	1,596.66 b-a	Budget Proposed	5,950.00
ASN Number	10100510013	Current Years Balance	4,353.34 a	Encumbrance	0.00 c	Budget Approved	0.00
				Next Mo. Bills	\$0.00 d		
				Ecumb. Balance	\$1,596.66 b-(a+c+d)		

Acct's Payable	(Continued)	Batch #	Expensed	Amount	Check#	Check	Vendor Name	PO Number	Invoice#	Invoice	
Pick up digger truck/Fuel		630	06/30/2009	85.01	14789	06/30/2009	Conoco Inc.		092313	6/30/09	
Pick up digger truck/fuel		630	06/30/2009	58.00	14789	06/30/2009	Conoco Inc.		154358	6/30/09	
Total Acct's Payable				\$4,174.69							

Journal Source:AJ	Batch #	Posted	Amount	Transaction#	Vendor Name	PO Number	Invoice#	Invoice	
Copier charges 8/08	10	09/10/2008	20.16	320					
Copier charges 9/08	6	10/06/2008	10.26	328					
Copier charges 10/08	10	11/10/2008	64.28	350					
Copier charges 11/08	9	12/09/2008	5.20	370					
Copier charges 11/08	9	12/09/2008	25.06	370					
Copier charges 12/08	6	01/06/2009	1.90	379					
Copier charges 1/09	4	02/04/2009	16.35	398					
Copier charges 2/09	4	03/04/2009	6.94	411					
Postage costs 2/09	4	03/04/2009	0.59	412					
Copier charges 3/09	8	04/08/2009	6.54	431					
Copier charges 4/09	11	05/11/2009	5.18	444					
Postage costs 5/09	11	06/11/2009	16.19	464					
Total Journal Source:AJ			\$178.65						

Activity for Date Range: 7/1/2008 to 6/30/2009 **\$4,353.34**

Account Activity

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Grand Valley BOCES

Date Range: 7/1/2009 to 6/30/2010

Account		Current Account Values		Current Budget Totals		Next Year Budget(s)	
Description	Supplies/Mat-Elineworker	Balance Start of Month	11,078.89	Budget	5,950.00 b	Budget	0.00
Account Number	10-499-10-1041-0600-000-0000-2	Current Month	0.00	Budget Balance	(5,128.89) b-a	Budget Proposed	11,500.00
ASN Number	10100510013	Current Years Balance	11,078.89 a	Encumbrance	0.00 c	Budget Approved	0.00
				Next Mo. Bills	\$0.00 d		
				Ecumb. Balance	(5,128.89) b-(a+c+d)		

Acct's Payable	Batch #	Expensed	Amount	Check#	Check	Vendor Name	PO Number	Invoice#	Invoice
Tamper hose, coupler set, etc.	729	07/28/2009	66.00	14898	07/29/2009	Quest Inc.	0000000127	24488	7/23/09
Tamper hose, coupler set, etc.	729	07/28/2009	39.00	14898	07/29/2009	Quest Inc.	0000000127	24488	7/23/09
Tamper hose, coupler set, etc.	729	07/28/2009	176.00	14898	07/29/2009	Quest Inc.	0000000127	24488	7/23/09
Tamper hose, coupler set, etc.	729	07/28/2009	38.00	14898	07/29/2009	Quest Inc.	0000000127	24488	7/23/09
Tamper hose, coupler set, etc.	729	07/28/2009	28.00	14898	07/29/2009	Quest Inc.	0000000127	24488	7/23/09
Lock & chain for gate south campus	827	08/05/2009	26.89	14975	08/28/2009	Petty Cash	30385-2		7/29/09
Keys for vehicles	812	08/20/2009	31.00	14952	08/20/2009	Simmons Lock & Key	227385		8/11/09
Labor tos ervice digger, bucket and	827	08/27/2009	1,360.00	14972	08/28/2009	KT Services	09-14-1-5		8/21/09
Antifreeze, valve caps, bulbs	909	08/27/2009	39.31	14992	09/22/2009	Bookcliff Auto Parts	779217		8/20/09
Parts to service digger, bucket trucks,	909	08/27/2009	27.25	14992	09/22/2009	Bookcliff Auto Parts	778237		8/19/09
Parts to service digger, bucket, trucks	909	08/27/2009	711.46	14992	09/22/2009	Bookcliff Auto Parts	778179		8/19/09
Trailer registration renewal	9828	08/28/2009	33.67	9733	08/28/2009	Mesa County Clerk	TRI-UT1		8/28/09
Temporary tag	92828	08/28/2009	30.54	9733	08/28/2009	Mesa County Clerk	82809		8/28/09
Truck registration renewal	9828	08/28/2009	1,214.27	9733	08/28/2009	Mesa County Clerk	525ESX		8/28/09
Truck registrationrenewal	9828	08/28/2009	1,214.27	9733	08/28/2009	Mesa County Clerk	537FKJ		8/28/09
Hose & fittings for trencher	909	09/02/2009	39.69	14993	09/22/2009	Card Services-Business Card	116175		8/1/09
Scale services for digger truck	930	09/02/2009	10.00	15067	09/30/2009	Petty Cash	409069		8/31/09
Fitting, nuts, bolts	909	09/10/2009	12.67	14992	09/22/2009	Bookcliff Auto Parts	772632		8/11/09
Nuts, bolts	909	09/10/2009	1.79	14992	09/22/2009	Bookcliff Auto Parts	773962		8/12/09
Multi meters, electrical tape	1007	09/29/2009	185.88	15085	10/20/2009	Card Services-Business Card	9831867		9/25/09
P. Roark business cards	1007	10/07/2009	41.50	15123	10/20/2009	Peczuh Printing Company	98555		9/21/09
Truck inspections	1111	11/03/2009	480.00	15199	11/13/2009	Universal Inspection Ltd.	CO91101		11/1/09
Aluminum tie wire	1209	12/16/2009	202.50	15278	12/17/2009	Western United Supply	0000000146	1102789-01	11/10/09
Preform distribution tie I/O ACSR	1209	12/16/2009	1,005.00	15278	12/17/2009	Western United Supply	0000000146	1102789-02	12/4/09
Buck squeeze	1223	12/21/2009	4,360.20	15290	12/23/2009	R & M Sales Company Inc.	0000000159	53603	12/16/09
Diesel Fuel 100 gal	407	04/06/2010	294.00	15494	04/13/2010	Conoco Inc.	191709		3/31/10
Total Acct's Payable			\$11,668.89						

Journal Source:AJ	Batch #	Posted	Amount	Transaction#	Vendor Name	PO Number	Invoice#	Invoice
Copier charges 8/09	21	09/21/2009	39.32	26				
Copier charges 10/09	11	11/11/2009	26.44	54				

Account Activity

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Grand Valley BOCES

Date Range: 7/1/2009 to 6/30/2010

Account		Current Account Values		Current Budget Totals		Next Year Budget(s)	
Description	Supplies/Mat-Elineworker	Balance Start of Month	11,078.89	Budget	5,950.00 b	Budget	0.00
Account Number	10-499-10-1041-0600-000-0000-2	Current Month	0.00	Budget Balance	(5,128.89) b-a	Budget Proposed	11,500.00
ASN Number	10100510013	Current Years Balance	11,078.89 a	Encumbrance	0.00 c	Budget Approved	0.00
				Next Mo. Bills	\$0.00 d		
				Ecumb. Balance	(5,128.89) b-(a+c+d)		

Journal Source:AJ	(Continued)	Batch #	Posted	Amount	Transaction#	Vendor Name	PO Number	Invoice#	Invoice
Copier charges 10/09		11	11/11/2009	62.38	54				
Copier charges 12/09		18	01/15/2010	1.00	89				
Postage 12/09		18	01/15/2010	5.45	89				
Copier charges 1/10		9	02/09/2010	0.02	103				
Postage 2/10		9	03/09/2010	0.44	119				
Copier charges 2/10		9	03/09/2010	0.02	120				
Copier charges 3/10		12	04/12/2010	0.02	141				
Copier charges 4/10		10	05/10/2010	0.02	153				
Copier charges 4/10		10	05/10/2010	5.74	153				
Quest Inc./Lineworker/Tamper hose,		22	06/22/2010	(347.00)	176				
Lineworker/Western United/Preform		12	06/30/2010	(383.85)	204				

Total Journal Source:AJ (\$590.00)

Activity for Date Range: 7/1/2009 to 6/30/2010 \$11,078.89

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Appendix D

Library Assessment

**Library Program Assessment
John U. Tomlinson Library
Colorado Mesa University**

Date of Assessment: September 2013
Purpose of Assessment: Program Review
Program under review: Electric Lineworker
Program Level/s: Technical Certificate
Liaison Signature: This review was prepared by Paul Mascareñas

1. Collection Assessment

For this assessment the Library of Congress Classification range was examined, including:

TK – includes Electric engineering and technologies.

In addition, the following Library of Congress subject headings were examined in the area of Electric Engineering:

Electronics; Electricity; Electric Power Systems;

An examination of the Library of Congress Classification ranges and subject headings listed above indicates that there are about 8,974 titles in the collection.

a. Reference Support:

The reference collection has a variety of resources covering electronics and related topics. These include specialized dictionaries, handbooks, and encyclopedias. A few of the more recent titles added to the collection include: *National Electric Code Handbook* (2011); *Newnes Dictionary of Electronics* (2002); *Market Share Reporter* (2011, 2 volumes); *U.S. Industry & Market Outlook* (2011); *Encyclopedia of Global Industries* (2011). *Hoover's Handbook of World Business* (2012), *Emerging Companies* (2011), *American Business* (2012), *Private Companies* (2011); *Wiley International Encyclopedia of Marketing* (2011)

b. Monographic Sources

Age Analysis of the 1,328 titles at the discretion of the Liaison

- 1% published since 2010
- 12% published 2000-2009
- 20% published 1990 – 1999
- 26% published 1980 – 1989
- 41% published before 1980

c. Periodicals

Although much of the periodical support for this program comes from online subscription sources, Tomlinson Library continues to subscribe to about fifty

titles, in a print or hardcopy format, that support this program,. This includes staples of the discipline such as *Business Week*; *Harvard Business Review*; and *The Wall Street Journal*.

Tomlinson Library maintains a subscription to *Business Source Premier*, one of the major periodical databases supporting the discipline. *BSP* provides full text for more than 2,100 periodicals, including more than 1,100 peer-reviewed business publications. Another subscription database, *OmniFile Select*, provides additional full-text periodical support for this program.

d. Electronic Resources

In addition to the online resources identified above, databases such as *Oxford Reference Online* provide access to quality specialized dictionaries and handbooks. *LexisNexis Academic* provides access to company profiles and financial data for publicly traded companies; law reviews, case law and codes at the state and federal level; and an international collection of newspapers.

Other electronic resources include: *International Directory of Company Histories*, *Reference USA*, and *RIA Checkpoint* which is a tax research database containing the full-text of United States tax law and code (with commentary), IRS rulings and releases, tax news sources, tax court rulings and international tax treaties.

Morningstar Mutual Funds is now available online. The all inclusive investment research database which features data and analysis on over 14,000 international and domestic stocks, 24,000 mutual funds, and more than 1500 exchange traded funds is now available electronically.

As a Selective Federal Depository, Tomlinson Library receives documents from many Federal departments and agencies, such as the Census Bureau, Small Business Administration, and Department of Labor. Increasingly, these items are distributed in an electronic format, and are represented by a catalog record in our online catalog. A web link within the record takes the user to the electronic document.

2. Evaluation of the total collection

a. Strengths

Library funding for the acquisition of materials supporting the Business Administration program remains strong and reflects this Department's status as having the most declared majors on the Colorado Mesa University campus. As new courses and programs are added, it will be important to provide ongoing support through initial one-time funding, as well as base building funding to the library materials budget. The increasing cost of library materials should also be reflected in the materials budget.

The monographic collection is fairly current, with over 40% of titles published since 1990. Electronic access to materials is increasing with subscriptions to Springer eBooks and former NetLibrary now Ebsco Host eBooks service. With remote authentication in place, CMU students, faculty and staff can access these materials 24 hours a day.

b. Weaknesses

Regularly scheduled shelf maintenance would insure the currency of the collection. The business librarian liaison in collaboration with faculty can help maintain the Tomlinson Library's monograph collection by weeding dated and rarely circulated materials.

3. Recommendations

In lieu of the changing needs of our faculty, staff, and students, faculty in the Business Administration program are encouraged to actively participate in the selection of materials for the library collection. This participation is appreciated and is a necessary component in the building of a collection that is both current and retrospective in its support of the curriculum as the wealth of resources and formats increase.

Library Director: Sarah Cron

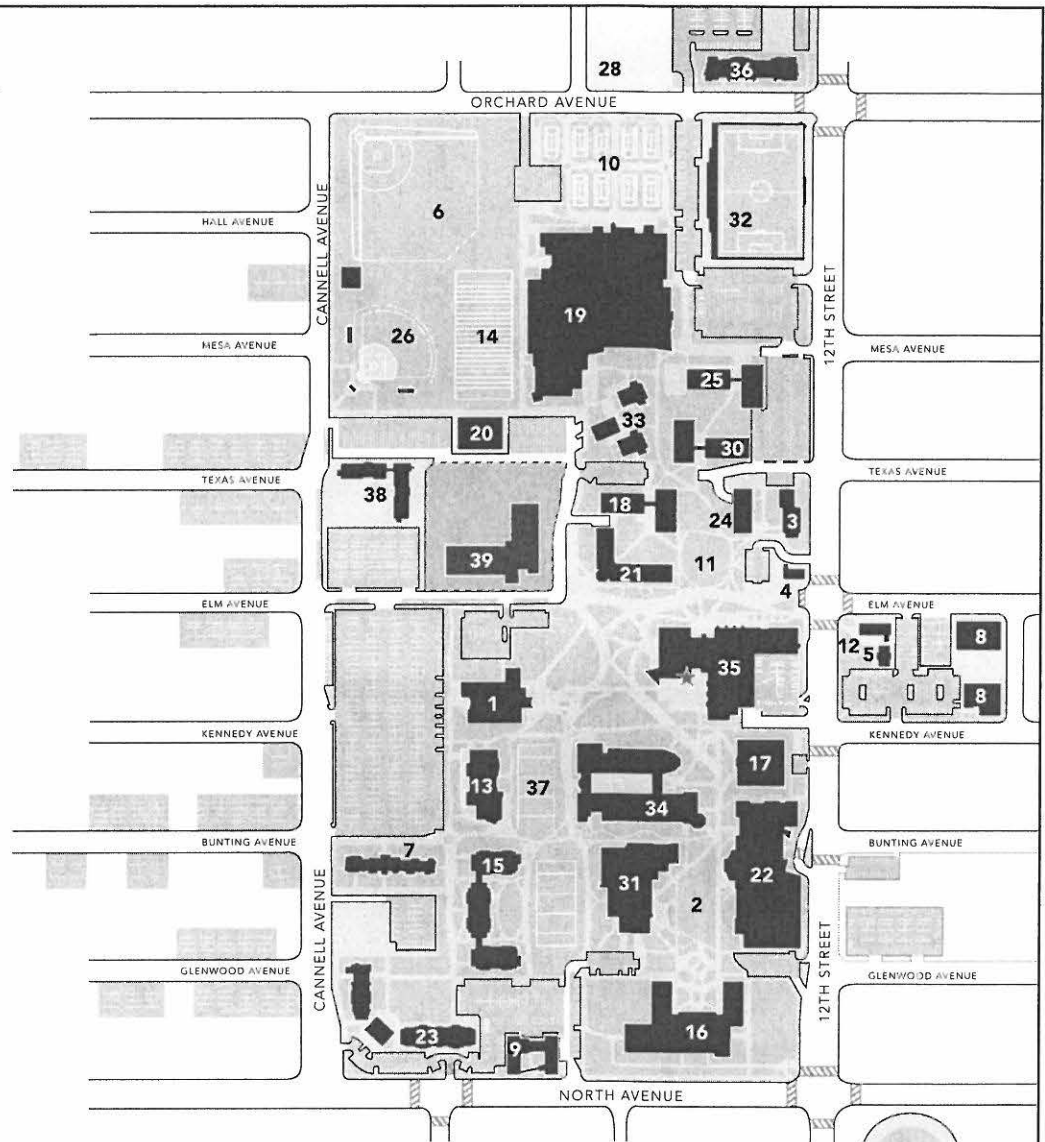
Date: November 29, 2011

Appendix E

Physical Facilities

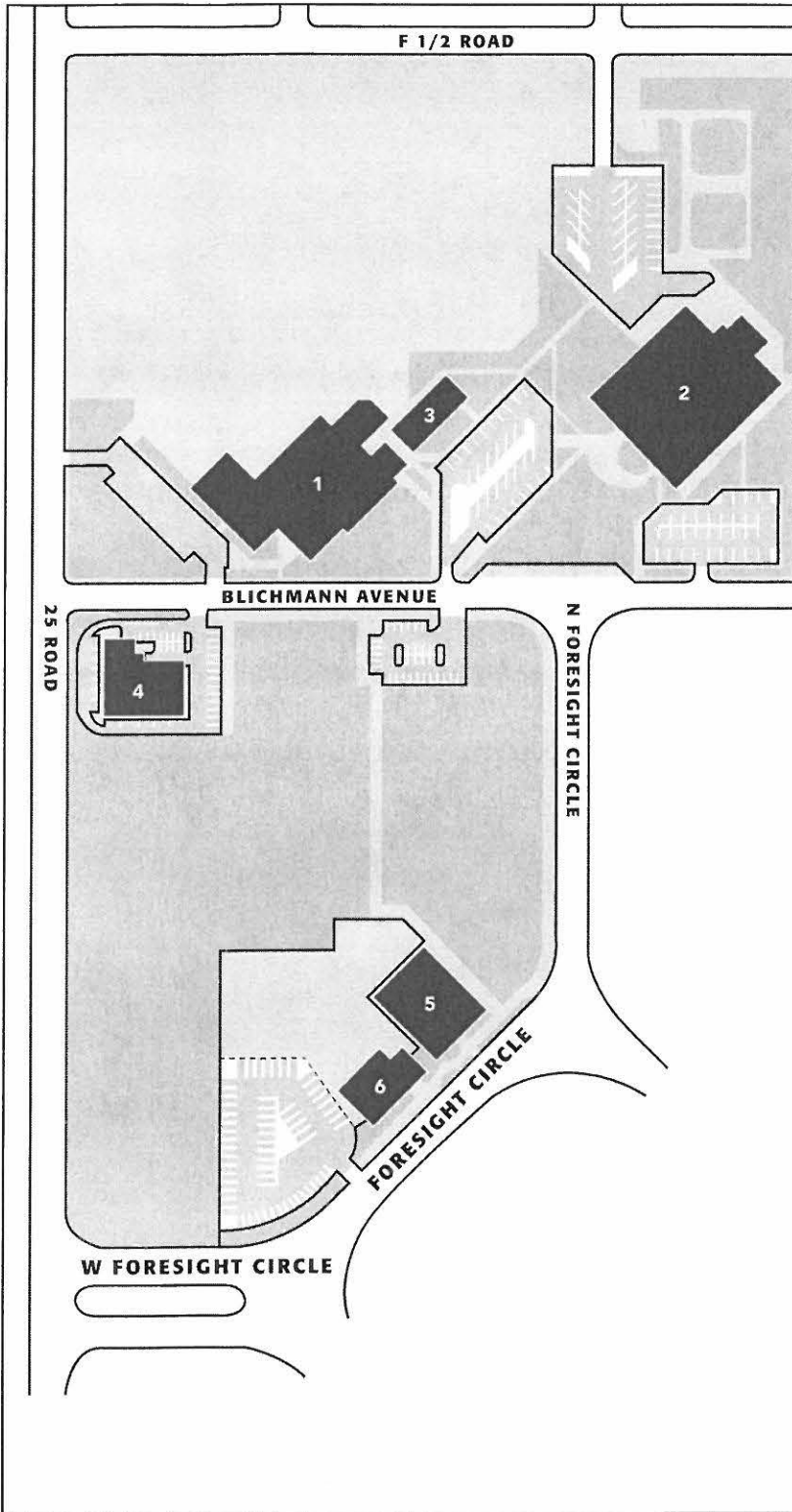
MAP LEGEND

Building (code)	Number
Academic Quad	2
Admissions Welcome Center (AO)	3
Albers Hall (AH)	4
Diversity, Advocacy and Health; Office of Student Success	
Alumni Association (A/F)	5
Bergman Practice Field	6
Bunting Hall (BH)	7
Campus Services, Facilities (CSA)	8
Mail Room, Purchasing, Maintenance Shops	
Delta Field	37
Development Center (DEVCTR)	9
Little Mavericks Learning Center	
Development Office (A/F)	5
Dominguez Hall (DH)	1
Elliott Tennis Complex	10
Elm Avenue Quad	11
Elm Hall (EH)	12
Escalante Hall (ESH)	39
Fine Arts Building (FA)	13
Football Practice Field	14
Foundation (A/F)	5
Garfield Hall (GH)	38
Grand Junction Police Substation (UC)	35
Grand Mesa Hall (GMH)	15
Houston Hall (H)	16
Educational Access Services (EAS), Testing Center, Tutorial Learning Center (TLC)	
Lowell Heiny Hall (LHH)	17
Advising Center, Accounting and Financial Services, Financial Aid, Human Resources, President's Office, Registrar's Office, Student Services	
Mary Rait Hall (MRH)	18
Maverick Center (MC)	19
Brownsen Arena, El Pomar Natatorium, Hamilton Recreation Center, Health Sciences Center, Monfort Family Human Performance Lab, Saunders Field House	
Maverick Pavilion (MAVP)	20
Monument Hall (MH)	21
Moss Performing Arts Center (MPAC)	22
Box Office, Mesa Experimental Theatre (MET), Recital Hall, Robinson Theatre	
North Avenue Hall (NAH)	23
Orchard Avenue Apartments	36
Outdoor Program	24
Pinon Hall (PH)	25
Residence Life Center (RL)	24
Softball Stadium	26
Stocker Stadium	27
Student Health Center	28
Suplizio Field	29
Tolman Hall (TH)	30
Tomlinson Library (L)	31
Walker Field Stadium	32
Walnut Ridge Apartments (WR)	33
Wubben Hall and Science Center (WS)	34
University Center	35
Art Gallery, Ballroom, Bookcliff Cafe, Career Services, Center for Student Involvement, CMU Bookstore, Dining Hall, Game Room, MAVcard Office, Parking Services, Wells Fargo Bank	



Colorado Mesa University
 1100 North Avenue
 Grand Junction, CO 81501
 970.248.1020

- Campus Buildings
- Campus Police
- Parking
- City of Grand Junction Buildings
- Construction

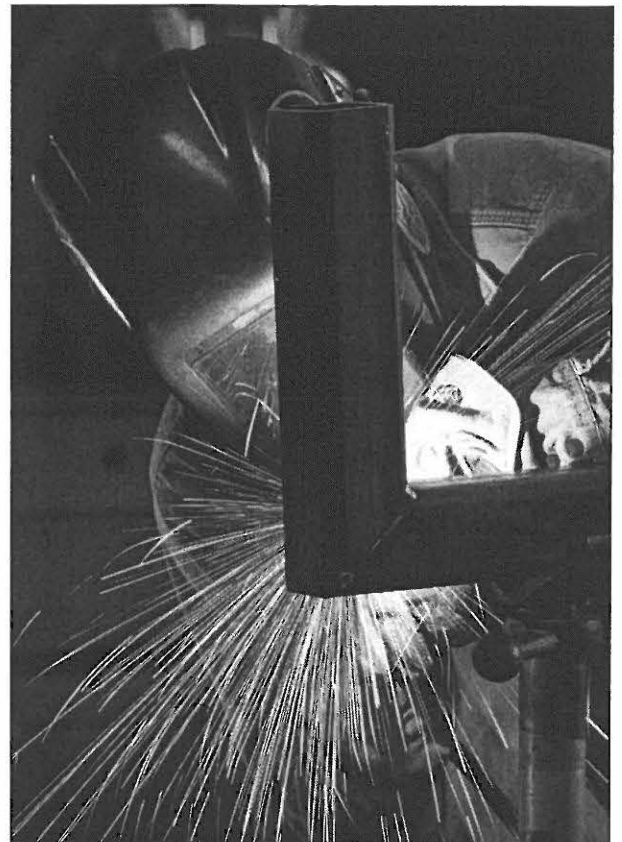


MAP LEGEND

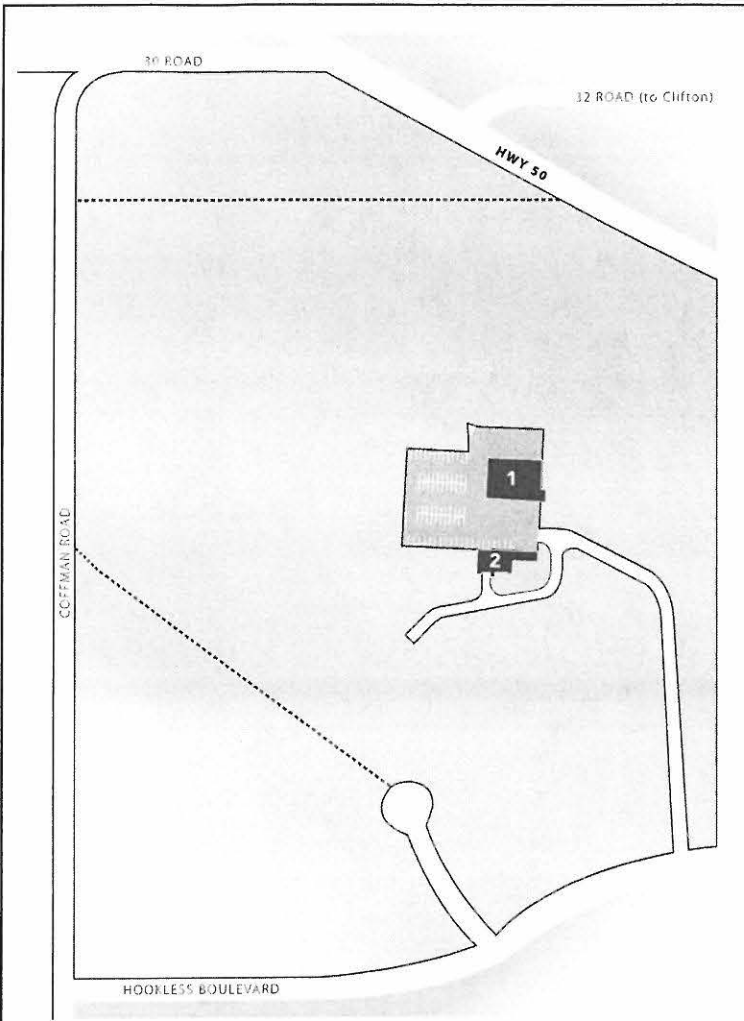
Building (code)	Number
Archuleta Engineering Center (AEC)	5
Archuleta Engineering Center (AECB)	6
Bishop Health Sciences (BH)	4
Building B (BB)	2
Chez Lena Restaurant, Student Services, Community Education Center	
Valley School (BC)	3
Youngblood Building (BA)	1

- Campus Buildings
- Parking

Western Colorado Community College
2508 Blichmann Avenue
Grand Junction, CO 81505
970.255.2600



WHITEWATER FACILITY



MAP LEGEND

Building (code) Number

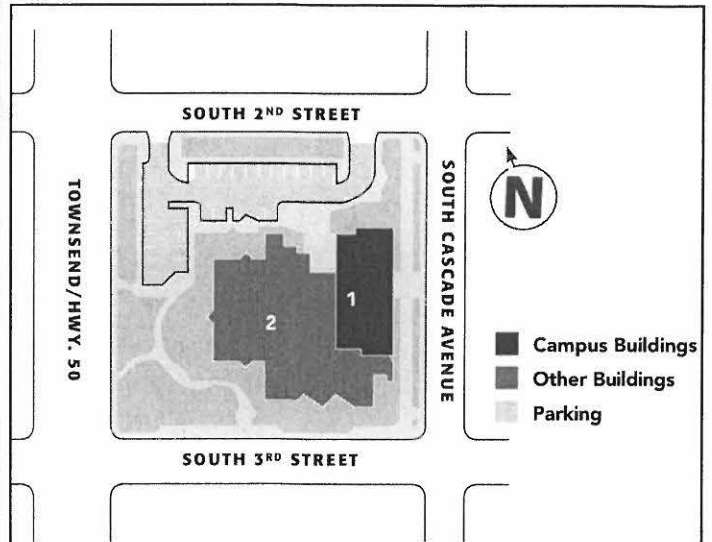
Forensic Investigation Research Station (FIRS) 1
 Future Electric Lineworker Program 2

Colorado Mesa University
Whitewater Facility
 950 Coffman Road
 Whitewater, CO 81527



■ Campus Buildings
 ■ Parking

MONTROSE CAMPUS



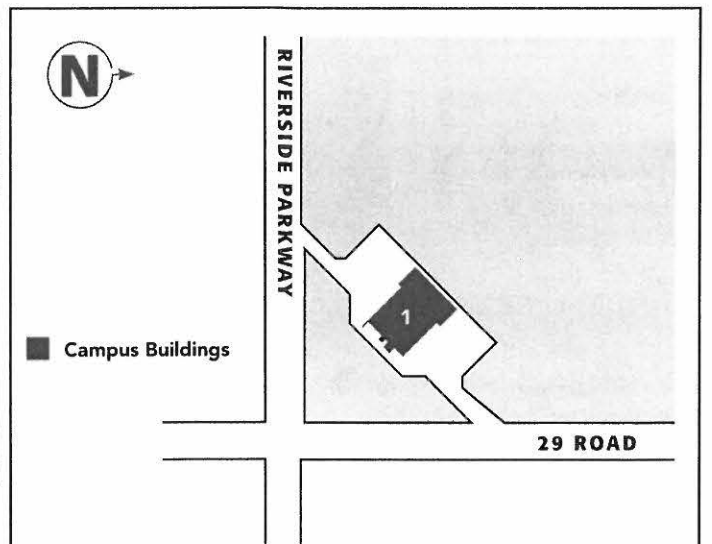
MAP LEGEND

Building (code) Number

Colorado Mesa University - Montrose (MONT) 1
 Montrose Regional Library 2

Colorado Mesa University
Montrose Campus
 234 South Cascade Avenue
 Montrose, CO 81401
 970.249.7009

SOUTH FACILITY



Colorado Mesa University
South Facility
 2890 Riverside Parkway
 Grand Junction, CO 81504

MAP LEGEND

Building (code) Number

Industrial Energy Training Center (IETC) . . 1



Appendix F

Assessment

COLORADO MESA UNIVERSITY
Program Outcome and Assessment Plan Template

Program Name: Electric Lineworker

Date: 9/10/2013

Program Outcomes	Courses/Educational Strategies Indicate if outcome is Beginning(B), Developing(D) or Advanced(A)	Assessment Method(s)	Time of Data Collection/ Person Responsible	Results of Assessment	Actions Taken
Communication	ELEC 125(B) Develop a daily written plan to establish daily work routine and safety.	What: Daily Job Briefing How: Completes daily briefing to meet industry standards.	Who: Instructor of record When: daily	Results: Key Findings: Conclusions:	Action: Re-evaluation Date:
Computational	MATH 107(B) Apply mathematical concepts to perform electrical formula calculations ELEC120 (D)	What: Computational concepts required of an electric line worker How: Final Exam	Who: Instructor When: End of semester	Results: Key Findings: Conclusions:	Action: Re-evaluation Date:
Critical Thinking	ELEC 131L Evaluate a workplace situation and determine which standard operating procedure to applies (B)	What: Daily SOP assignments How: subjective assessment based on industry standards	Who: Instructor When: weekly	Results: Key Findings: Conclusions:	Action: Re-evaluation Date:
Specialized Knowledge	ELEC 132 & 132L Determine standards required by OSHA and apply to daily briefing(B)(D)	What: Application of OSHA standards How: Written Exams	Who: Instructor When: Weekly	Results: Key Findings: Conclusions:	Action: Re-evaluation Date:
Applied Learning	ELEC 137L(D) Using proper safety procedures perform line worker tasks required in a pole field.	What: Blind Assessment set up, administered and evaluated by the Advisory Committee How: Assessment rubric furnished by the Advisory Committee.	Who: Instructor When: Twice a semester.	Results: Key Findings: Conclusions:	Action: Re-evaluation Date:

Ethics	ELEC 125(D) Using accepted ethical behavior and practices apply these principles to the daily job briefing	What: Daily Job Briefing How: Ethics rubric	Who: Instructor When: Daily		
---------------	---	--	--	--	--

Crew 1					Crew 2				
	SAFETY	Climbing	ATTITUDE	KNOTS		SAFETY	Climbing	ATTITUDE	KNOTS
Paul	3	2	3	3	Jeremy	3	3	3	3
Ryan Fox	3	3	3	3	Dave	2	3	3	3
Ashton	3	3	3	2	Tray	3	3	3	3
					Parke	3	2	3	3
Crew 3					Crew 4				
Dave	3	3	3	3	Matt	2	2	3	3
Ben	3	3	3	3	Keith	3	3	3	3
Ryan Murch	3	3	3	3	Dillon	3	2	3	3

TASK

- 1 Below Average
- 2 Average
- 3 Above Average

- INSULATOR change (C-1)
- Bell change (A-5)

Crew 1					Crew 2				
	Climbing	Shedding	Attitude	KNIFE		Climbing	SAFETY	Attitude	KNIFE
D [redacted]	3	3	3	3	R [redacted]	3	3	3	3
P [redacted]	3	3	3	2	K [redacted]	3	3	3	3
D [redacted]	3	3	3	3	T [redacted]	3	3	3	3
D [redacted]	3	3	3	3	A [redacted]	2	3	3	3
Crew 3					Crew 4				
P [redacted]	2	3	3	3	R [redacted]	2	3	3	2
J [redacted]	2	2	3	3	B [redacted]	1	3	3	3
D [redacted]					M [redacted]	3	3	3	2
D [redacted]	3	3	3	3					

- 1 - Needs Improvement
- 2 - Average
- 3 - Above Average

Western Colorado Community college
ELCL 131 L
Electric Distribution Theory I Lab
Crew Assignments

Crew 1	Pole Top Rescue	Resume	U.G. ID	ATTITUDE	SAFETY	Crew 2	Pole Top Rescue	Resume	U.G. ID	ATTITUDE	SAFETY
D [redacted]	3 2:14	1.5	3	3	3	J [redacted]	3 2:05	2	3	3	3
M [redacted]	2.5 2:15	1	2.5	3	3	K [redacted]	3 2:53	X	2	3	3
J [redacted]	2.5 2:53	2	3	3	3	R [redacted]	3 2:33	2	3	3	3
Crew 3						Crew 4					
T [redacted]	3 1:35	1	3	3	3	B [redacted]	2.5 1:45	1	3	3	3
P [redacted]	3 1:49	1.5	2.5	3	3	A [redacted]	3 1:25	1.5	3	3	3
C [redacted]	3 1:27	2.5	2.5	3	3	Ch [redacted]	3 1:20	3	3	3	3
S [redacted]	3 2:20	1.5	3	3	3						

- 1 Below Average
- 2 Average
- 3 Above Average

Western Colorado Community college
ELCL 131 L
Electric Distribution Theory I Lab
Crew Assignments

	PIN Insulator change	Suspension	SAFETY	ATTITUDE	KNOTS		PIN Insulator change	Suspension	SAFETY	ATTITUDE	KNOTS
Crew 1						Crew 2					
Tanner Simpson	3	3	3	3	3	Jason Degler	3	3	3	3	2
Austin McCracken	3	3	3	3	3	Mitchell McCallister	2	3	3	3	2
Eric Simpson	2	2	2	3	3	Preston Dillingham	3	3	3	3	3
Charles Scherzath	3	3	3	3	3						
Crew 3						Crew 4					
Jose Medina	3	2	2	3	3	Randall Bagwell	3	2	3	3	3
Sebastian Mahon	3	2	3	3	2	Chris Goodnough	3	3	3	3	3
Kris Porter	3	3	3	3	3	Dalton Davis	3	3	3	3	3
Sean Hergenroter	3	3	3	3	3						

- 1 Below Average
- 2 AVERAGE
- 3 ABOVE AVERAGE

TASKS:
 Pin Type Insulator Change
 Suspension Type Insulator Change

Western Colorado Community college
 ELCL 131 L
 Electric Distribution Theory I Lab
 Crew Assignments

Crew 1	Climbing	SAFETY	ATTITUDE	KNOTS	Crew 2	Climbing	SAFETY	ATTITUDE	KNOTS
Bigwell Randal	1	3	3	3	Dillingham Preston	2	3	3	3
Hegenreter Sean	2	2	3	3	Goednough Christopher	2	3	3	3
Simpson Tanner	2	2	3	3	McCallister Johnathon	1.5	3	3	3
					McCracker Austin	3	3	3	3
Crew 3					Crew 4				
Davis Dalton	2	2	3	3	Degler Jason	2	2	3	2
Porter Kristopher	2	3	3	2	Mahan Sebastian	1	2	3	2
Scherbarth Charles	3	2	3	2	Medina Jose	2	2	3	3
					Simpson Eric	1	3	3	3

- 1 Needs Improvement
- 2 Average
- 3 Above Average

Western Colorado Community college
 ELCL 131 L
 Electric Distribution Theory I Lab
 Crew Assignments

Crew 1	Climbing	SAFETY	ARM CHANGE	ATTITUDE		Crew 2	Climbing	SAFETY	ARM CHANGE-OUT	ATTITUDE
Jason Decker	3	3	3	3		Chris Goodnough	2	2	2	3
Dallen Davis	3	3	3	3		Jose Medina	3	2	3	3
Austin McCracken	3	3	3	3		Kris Porter	3	3	3	3
Mark McCallister	2.5	3	2.5	3		Bruce Simpson	2	3	2	3
Crew 3					Crew 4					
Randall Sawwell	2	3	2	3						
Tim Simpson	3	2	2	3						
Charles Scherbarth	3	3	3	3						
Preston O'Rourke	3	3	3	3						
Sam McCallister	3	2	2	3						

- 1 Below Average
- 2 Average
- 3 Above Average

Western Colorado Community college
 ELCL 132 L
 Electric Distribution Theory I Lab
 Crew Assignments

April

Crew 1	Pole Top Rescue	Resume	UG ITA	ATTITUDE	SAFETY	Crew 2	Pole Top Rescue	Resume	U.G. ITA	ATTITUDE	SAFETY
Shane Davis	3 1:16	1.5	3	3	3	Logan Brewer	3 2:08	1	3	3	3
Taylor Archibald	2 2:09	1	1	3	3	Riley Christensen	3 2:21	1.5	2	3	3
Ernie Sinks	2 2:19	2.5	1	3	3	London Shaffer	3 3:00	2	2	3	3
Dalton Latz	3 2:10	2.5	2	3	3	Sam Weaver	3 2:34	1	3	3	3
Austin Vance	2 2:09	2.5	3	3	3	Dylan Way	3 2:22	2	2	3	3
Crew 3						Crew 4					
Eric Lowary	3 2:32	2	3	3	3						
Kyle Maier	3 2:17	1.5	2	3	3						
Phil Varnes	3 3:15	1	1	3	3						
Tyler Christensen	3 2:02	1	1	3	3						

- 1 Below Average
- 2 Average
- 3 Above Average

Western Colorado Community college
ELCL 132 L
Electric Distribution Theory I Lab
Crew Assignments

March

Crew	Climbing	Safety	Area Charge	ATTITUDE	Crew 2	Climbing	SAFETY	Area Charge-out	ATTITUDE
K [redacted]	3	3	3	3	Logan [redacted]	3	3	3	3
T [redacted]	3	3	3	3	Seif Davis [redacted]	3	3	3	3
B [redacted]	3	3	3	3	E [redacted]	3	3	3	3
Austin [redacted]	3	3	3	3	San Weaver [redacted]	A			
K [redacted]					I [redacted]				
T [redacted]					S [redacted]				
B [redacted]					E [redacted]				
A [redacted]					S [redacted]				
					Crew 4				
R [redacted]	3	3	3	3	T [redacted]	3	2	3	3
L [redacted]	3	2	3	3	Peter [redacted]	3	3	3	3
D [redacted]	2	3	2	3	D [redacted]	3	2	3	3
R [redacted]					T [redacted]				
I [redacted]					P [redacted]				
D [redacted]					D [redacted]				

- 1 Below Average
- 2 Average
- 3 Above Average

Western Colorado Community college
 ELCL 131 L
 Electric Distribution Theory I Lab
 Crew Assignments

Oct /Nov	Climbing	SAFETY	ATTITUDE	Knotts		Climbing	SAFETY	ATTITUDE	Knotts	
Crew 1						Crew 2				
Tyler Arnold	2	2	3	2		Jordan Barbosa	2	2	3	3
Justin Barley	2	1	3	2		Colby Grey	3	2	3	3
Matt Fenske	2	2	3	1		Ben Haring	2	2	3	3
Rich Knusa	2	2	3	2		David McDermott	2	2	3	3
Crew 3						Crew 4				
Jesse Hand	2	3	3	3		Cody Barber	2	2	3	3
Cody Harrison	2	2	3	3						
Chris Hawks	2	2	3	3		Dustin Leonard	3	2	3	3
Seb Wolff	2	2	3	3		Jace Noe	3	2	3	3

SCORING

- 1 Needs Improvement
- 2 AVERAGE
- 3 ABOVE AVERAGE

Western Colorado Community college
 ELCL 131 L
 Electric Distribution Theory I Lab
 Crew Assignments

November

	PIN Insulator change	Suspension	SAFETY	ATTITUDE	KNOT		PIN Insulator change	Suspension	SAFETY	ATTITUDE	KNOTS
Crew 1						Crew 2					
Logan Brewer	3	2	3	3	3	Riley Christensen	3	3	3	3	3
Iman Shefer	3	3	3	3	3	Eric Lowary	2	3	3	3	3
Dalton Toff	3	3	3	3	3	Peter Martinez	2	2	2	3	3
Austin Vance	3	2	3	3	3	Dylan Wey	3	2	3	3	3
Crew 3						Crew 4					
Scott Davis	3	3	3	3	3	Trevor Cochran		2	3	3	3
Kyle Mait	3	2.5	3	3	3	Mortensen		2	3	3	2
Scott Weaver	2	1	2	3	1	Brian		3	3	3	3

- 1 Below Average
 - 2 Average
 - 3 Above Average
- TASK
 PIN TYPE INSULATOR change
 SUSPENSION TYPE INSULATOR change.

Western Colorado Community college
 ELCL 131 L
 Electric Distribution Theory I Lab
 Crew Assignments

October 2013

Crew 1	Climbing	Safety	ATTITUDE	KNOTS		Crew 2	Climbing	Safety	ATTITUDE	KNOTS	
Mat [redacted]	2	3	3	1		Daniel [redacted]	2	3	3	2	
Brandon [redacted]	2	3	3	2		Dylan [redacted]	3	3	3	3	
Matt Reed	3	3	3	3		Trey [redacted]	3	3	3	2	
MM						DE					
BM						DS					
MR						TH					
Crew 3						Crew 4					
Weston [redacted]	2	1	3	3		Robert [redacted]	3	3	3	3	
Riley [redacted]	3	1	3	1		Caleb [redacted]	2	3	3	2	
Kris [redacted]	2	3	3	3		Brandon [redacted]	3	3	3	3	
WR						RG					
RS						CH					
KW						BZ					
Crew 5											
Dallas [redacted]	3	3	3	3							
Mich Van [redacted]	2	3	3	3							
Neal [redacted]	2	3	3	2							
DP											
MV											
NW											

- 1 - Needs Improvement
- 2 - Average
- 3 - Above Average

Western Colorado Community college
 ELCL 131 L
 Electric Distribution Theory I Lab
 Crew Assignments

November 2013

Crew 1	SAFETY	Climbing	ATTITUDE	KNOTS		Crew 2	SAFETY	Climbing	ATTITUDE	KNOTS	
Daniel Espinoza	1	1	3	2		Caleb Hollar	3	2	3	2	
Robert Gonzales	3	2	3	0		Matt Reed	3	3	3	3	
Matt Marak	3	2	3	3		Riley Shaffer	3	3	3	3	
Neal Williams	3	2	3	3		Dylan Stroud	2	3	3	2	
DE						CH					
RG						MR					
MM						RS					
NW						DS					
Crew 3						Crew 4					
Dallas Parker	2	3	3	2		Trey Honey	2	2	3	2	
Weston Raemussen	2	2	3	2		Mich VanAckere					
Braydon Link	2	2	3	2		Kris Wilson	2	1	3	3	
DP						TH					
WR						MV					
BZ						NW					
Crew 5											

- TASK
- 1 Below Average. INSULATOR Change (C-I)
 - 2 Average. Ball Change (A-S)
 - 3 Above Average.

Western Colorado Community college
 ELCL 131 L
 Electric Distribution Theory I Lab
 Crew Assignments

March 2012

	SAFETY	Climbing	ATTITUDE	ARM change	Time		SAFETY	Climbing	ATTITUDE	ARM change	Time
Crew 1						Crew 2					
Max [redacted]	3	3	3	3	2:16	Jordan Barbosa	3	3	3	3	3:23
Jesse Hand	3	3	3	2	3:57	Chris Hawks	3	2	3	2	4:12
Dustin Leonard	3	3	3	3	2:08	Rich Knouse	3	2	3	2	3:30
Sam Wollen	ABSENT										
Crew 3						Crew 4					
Tyler [redacted]	3	2	3	3	3:02	Cody Barto	3	2	3	3	4:13
Justin [redacted]	3	2	3	2	3:07	Colby Corey	2	3	3	3	2:28
Jose [redacted]	3	3	3	3	2:26	Ben Marin	3	3	3	3	2:14
Dustin [redacted]	3	3	3	3	3:15	Cody [redacted]	2	3	3	3	3:05

Time - Pole Top Rescue

- 1 - Needs Improvement
- 2 - Average
- 3 - Above Average

Western Colorado Community college
 ELCL 131 L
 Electric Distribution Theory I Lab
 Crew Assignments

October 1-5, 2012

Crew 1	Climbing	SAFETY	ATTITUDE	KNOTS		Crew 2	Climbing	SAFETY	ATTITUDE	KNOTS
Logan Brewer	2	3	3	2		Toft, Dalton	3	2	3	2
Christensen	2	3	3	2		Vance	2	2	3	3
Riley	2	3	3	2		Austin	2	2	3	3
Marin, Kyle	2	3	3	2		Sam	2	2	3	1
Mortenson	2	3	3	2		Weaver	2	2	3	1
						Wey	2	2	3	2
						Dylan	2	2	3	2
LB						DT				
CR						AV				
KM						SW				
TM						WD				
Lowary, Eric	2	3	3	3		Davis, Seth	3	2	3	2
Shaffer, Landon	3	2	3	3		Ketchum, Trevor	3	3	3	1
Blaine Sinks	2	2	3	3		Peter Martinez	3	2	3	3
EL						SD				
LS						KT				
BS						PM				

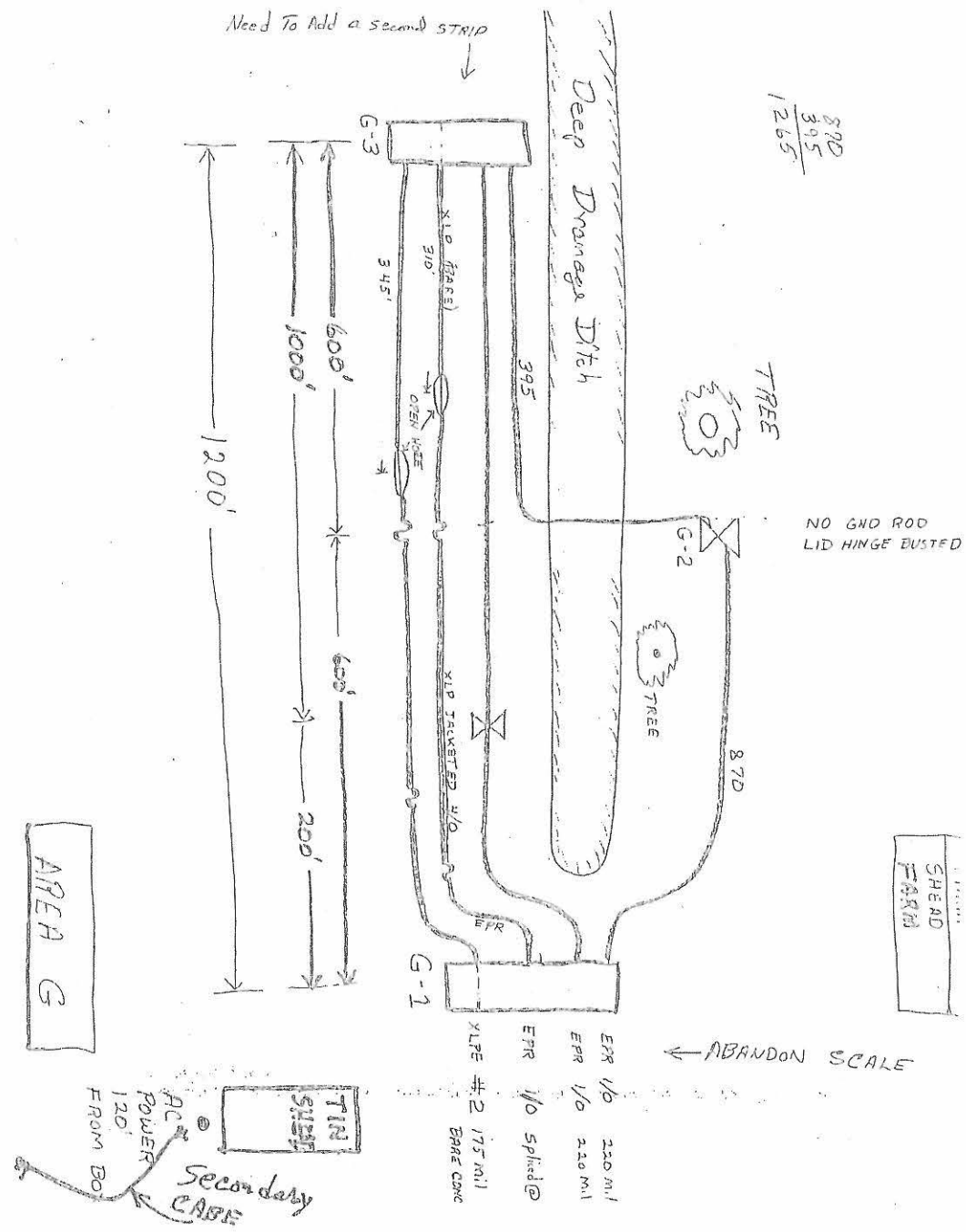
- 1 Needs Improvement
- 2 Average
- 3 Above Average

Electric Lineworker

Mike Birch	Grand Valley Rural Power	P.O. Box 190	Grand Junction, CO 81502	242-0040	mbirch@gvp.org
Doug Cox	Delta Montrose Electric Association	P.O. Box 910	Montrose, CO 815401	877/687-3632	dcox@dmea.com
Joshua Carpenter	IBEW Local Union 969	3210 E Road	Clifton, CO 81520	242-3432	joshua@ibew969.org
Wendell Goad	Holy Cross Energy	P.O. Box 2150	Glenwood Springs, CO 815602	970/945-5491	wgoad@holycross.com
Frank Sampson	White River Electric Assoc.	P.O. Box 958	Meeker, CO 81641	970/858-5041	fsampson@wrea.org
Roger Grogg	Gunnison County Electric	P.O. Box 180	Gunnison, CO 81230	970/641-3520	rgrogg@gcea.coop
John Cromer	Cromer Contracting Co., Inc.	P.O. Box 368	Craig, CO 81626	970/326-8349	polejockey@wildblue.net
David Churchwell	Highline Electric Assn	P.O. Box 57	Holyoke, CO 80734	970/854-2236	david@hea.coop
Mike Kostelecky	Excel Energy		Grand Junction, CO		mkos@ibew111.org

Appendix G

Future Complex Site Map

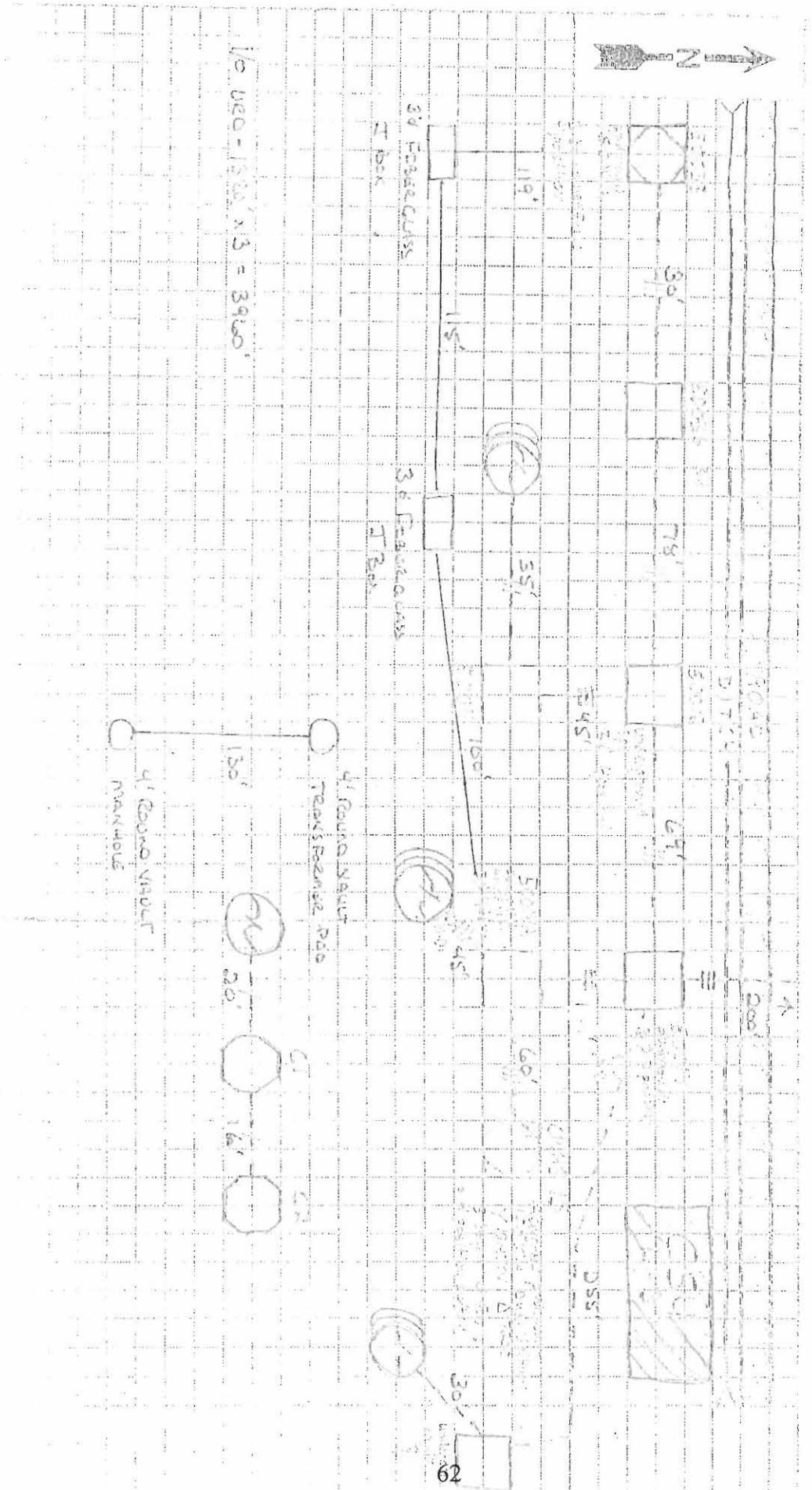


890
395
1265

SKETCH SHEET GOLF-7-MESA

CONSUMER NAME LAURENCE JAMES ACCOUNT NO. _____
 ADDRESS _____

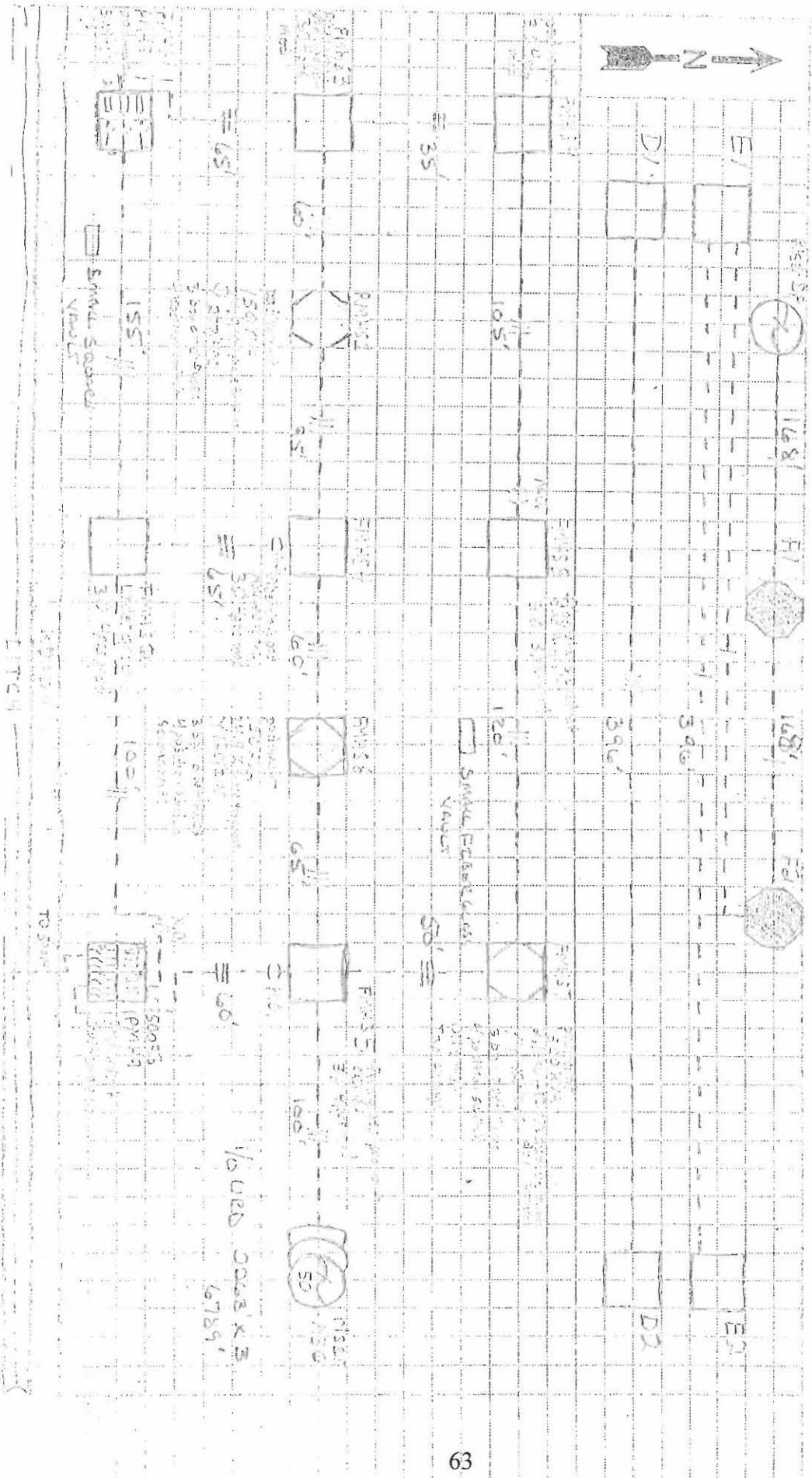
WORK ORDER _____ JOB ORDER _____
 SHEET _____ OF _____
 ENGINEER _____ DATE _____
 SCALE _____



SKETCH SHEET COLO-7-MESA

CONSUMER NAME _____ ADDRESS _____
 ACCOUNT NO. _____

WORK ORDER 121211 JOB ORDER _____
 SHEET OF _____ DATE _____
 ENGINEER _____ SCALE _____



Program Review
Electric Lineworker Program
Colorado Mesa University/ Western Colorado Community College
Grand Junction, CO

Site Visit – May 12, 2014

Mark D. Weaver ELE, JEL
Faculty/Chandler-Gilbert Community College
7360 E. Tahoe Ave
Mesa, AZ 85212
Office: 480-988-8255
Cell: 602-679-4456

The reviewer received electronic files with the purpose of the external review, the reviewer's responsibility, a proposed campus schedule, and documents for the CCL and the Academic Program Review Self-Study.

On May 12, 2014, the reviewer conducted an on-site campus visit to Colorado Mesa University/Western Colorado Community College that included a tour of the program classroom, lab and the campus organization providing support services to the program. The on-site visit included interviews and evaluative comments regarding the program with the following:

Tim Foster, President Colorado Mesa University
Carol Futhey, Vice President of Academic Affairs
Steve Werman, Asst. VP Academic Affairs/Dir. Graduate Studies
Gillian McKnight-Tutein, Asst. VP Academic Affairs/Dir. Distance Education
Bette Schans, Dir. Of Assessment/ Suzanne Lay Chair and Assessment Coordinator
Sarah Cron, Library Director

One member of the Advisory committee:

- Wendel Goad, Holy Cross REA

Students representing the Lineworker program were interviewed:

- Four (4) students enrolled in second semester of CCL program

The reviewer did not interview program alumni or employers of graduates.

The reviewer verified the accuracy included in The Academic Program Review Self-Study. To avoid redundancy, the excellent detail and comment included in the self-study are not repeated in the reviewers report.

The reviewer's report is sequenced with the evaluation of the CCL Program and a closing summary.

Executive Summary – Table

Program Review Element	Check the appropriate selection				Provide explanation if not agree with element and/or why unable to evaluate
	Agree	Not Agree	Unable to Evaluate	Not Applicable	
The program's self-study is a realistic and accurate appraisal of the program.	X				
The program's mission and its contributions are consistent with the institution's role and mission and its strategic goals.	X				
The program's goals are being met.	X				
The curriculum is appropriate to the breadth, depth, and level of the discipline.	X				
The curriculum is current, follows best practices, and/or adheres to the professional standards of the discipline.	X				Should AAS be added to curriculum to give students opportunity to advance later in career
Student demand/enrollment is at an expected level in the context of the institution and program's role and mission.	X				Increase in enrollment and demand may be higher if AAS is offered
The program's teaching-learning environment fosters success of the program's students.		X			Students did not agree with rotating instructors
Program faculty members are appropriately credentialed.	X				
Program faculty members actively contribute to service and advising.	X				
Campus facilities meet the program's needs.	X				
Equipment meets the program's needs.		X			Equipment (Digger/Derrick, Bucket Trucks) used by students needs to be updated to facilitate learning

Instructional technology meets the program's needs.	X				The opportunity for students to participate in the Mesa Hotline School gives WCCC students an advantage over students in like programs
Current library resources meet the program's needs.		X			Materials available for student check out to assist in learning is limited
Student learning outcomes are appropriate to the discipline, clearly stated, measurable, and assessed.		X			Assessment remains a work in progress for the Department (see Assessment below)
Program faculty members are involved in on-going assessment efforts.	X				
Program faculty members analyze student learning outcome data and program effectiveness to foster continuous improvement.		X			Faculty is working on evaluative processes. (see Assessment below)
The program's articulation of its strengths and challenges is accurate/ appropriate and integral to its future planning.	X				

Technical Certificate Electric Lineworker Program

MISSION STATEMENT

The mission of the CCL in Electric Lineworker Program is clearly defined and includes a curriculum that enables the graduate to achieve the mission. The mission of the program supports and is appropriate to the mission of the university.

CURRICULUM

The CCL program demonstrates a well-planned curriculum with an ongoing systematic process to thoroughly review the course sequence and the course content. The curriculum is consistent with the mission of the program. The program's strength is a result of the use of the Advisory Council to assess student's knowledge, problem-solving capabilities, leadership, crew work, and ability to recognize personal protective equipment, along with faculty and staff support. I understand the concept of rotating faculty to facilitate learning through different styles and concepts but according to students this process takes too much time for students to adjust to the contrasting teaching styles and students didn't buy into the concept.

STUDENT LEARNING OUTCOMES AND ASSESSMENT

Outcome assessment is recognized at the university, department, and program level as the essential first step employed to make any necessary modifications to meet the student needs in learning professional competencies. The expected knowledge, skills, and behaviors of students at graduation are appropriate. These outcomes are directly linked and applied to the curriculum in all courses. Assessment measures are being systematically applied on a regular basis. The assessment processes are evolving with measureable outcomes gathered by the Advisory Committee during an on-site evaluation which is administered in the spring and fall semesters. The Advisory Committee members use a rubric, created by faculty, to assess student learning. The program maintains a systematic review of the number of students selected, the number of program graduates, the number of graduates successfully earning the CCL, and the number of graduates employed in the lineworker field.

ACADEMIC ADVISEMENT

Strategies for advising students are defined, followed, and continually assessed for their effectiveness. All faculty participate as academic advisors for students in the program regarding program progress as well as providing career recommendations. The students report confidence in receiving accurate career and academic advisement. Students work closely with faculty selecting and scheduling courses prior to registration to ensure student success.

FACULTY

Program Head Gary Looft provides leadership and support for the Lineworker Program. Gary's connection to the needs of faculty, program and students is evident. Faculty Paul Behl and Patrick Roark offer two diverse lineworker backgrounds. Paul's professional experience has included 13 years with the International Brotherhood of Electrical Lineworkers Union (IBEW) and union contractors that provide him with a plethora of lineworker field knowledge. Patrick's 30 years of experience in the lineworker industry and broad knowledge of the industry operations and standards are assets to the program.

PROGRAM SUPPORT

Gillian McKnight-Tutien, Ed.D. Asst. Vice President, Academic Affairs/Online Course Director would like to collaborate with faculty to offer courses in the Electric Lineworker curriculum which would deliver skill sets in addition to technical skills. The possibility of blended classes offering instruction in Accounting, Business-Personal Computers or Management would build student skill sets required to professionally advance in the Lineworker industry. Courtney Bruch, Instruction and Reference Librarian, is planning to work with faculty to acquire additional DVD, DVR and industry books and magazines to expand student resources to ensure accessibility to electrical lineworker industry new technology and growing solar and wind technology information, news, goals, and objectives.

EXTERNAL COMMUNITY RELATIONSHIP

The Electric Lineworker Program uses an Advisory Committee comprised of industry leaders which evaluates students twice each semester. At the start of the evaluation, the committee announces to the students the specific skills and tasks that will be evaluated. For example, knot-tying, cross-arm change, ground rod installation, etc. Real world assessments are vital to the success of students. The process provides the student with direct feedback which can be used to improve and facilitate student learning. The program also takes advantage of a unique opportunity by attending the Mesa Hotline School. The Hotline School is offered each May at Western Colorado Community College's (WCCC) lineworker training facility. The educational experience affords the students the advantage of participating in courses offered by the Hotline School which are taught by vendor and industry professionals. Students are exposed to a variety of different types of construction and maintenance techniques introduced by the Hotline School's diverse group of instructors. Participation provides students with professional networking opportunities and to direct questions, inquiries and comments pertaining to local and national industry practices.

Lineworker Rubric

Student:

Instructor:

	Problem Solving	Hands On	Leadership	Crew Work	Safety (P.P.E.)
Overall Score	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
0	*Unprepared *Performs task w/o *Absenteeism *Lacks respect for self/other's *Total ignorance	*Unprepared *Performs task w/o *Absenteeism *Lacks respect for self/other's *Total ignorance	*Unprepared *Performs task w/o *Absenteeism *Lacks respect for self/other's *Total ignorance	*Unprepared *Performs task w/o *Absenteeism *Lacks respect for self/other's *Total ignorance	*Unprepared *Performs task w/o *Absenteeism *Lacks respect for self/other's *Total ignorance
1	*Doesn't understand concepts *One item a time *Lacks tool and material *Redirect task *Incomplete scheduling *Told to assume role model. *Honesty, Integrity, & Respect *Lack of recall.	*Doesn't understand concepts *One item a time *Lacks tool and material *Redirect task *Incomplete scheduling *Told to assume role model. *Honesty, Integrity, & Respect *Lack of recall.	*Doesn't understand concepts *One item a time *Lacks tool and material *Redirect task *Incomplete scheduling *Told to assume role model. *Honesty, Integrity, & Respect *Lack of recall.	*Doesn't understand concepts *One item a time *Lacks tool and material *Redirect task *Incomplete scheduling *Told to assume role model. *Honesty, Integrity, & Respect *Lack of recall.	*Doesn't understand concepts *One item a time *Lacks tool and material *Redirect task *Incomplete scheduling *Told to assume role model. *Honesty, Integrity, & Respect *Lack of recall.
2	*Proficient use of information *Few *Not all info. recalled used *Doesn't use all available tools & materials *Task Specific *Schedules within task *Professionalism. *Proficient forethought (recall)	*Proficient use of information's Few *Not all info. recalled used *Doesn't use all available tools & materials *Task Specific *Schedules within task *Professionalism. *Proficient forethought (recall)	*Proficient use of information's Few *Not all info. recalled used *Doesn't use all available tools & materials *Task Specific *Schedules within task *Professionalism. *Proficient forethought (recall)	*Proficient use of information's Few *Not all info. recalled used *Doesn't use all available tools & materials *Task Specific *Schedules within task *Professionalism. *Proficient forethought (recall)	*Proficient use of information's Few *Not all info. recalled used *Doesn't use all available tools & materials *Task Specific *Schedules within task *Professionalism. *Proficient forethought (recall)
3	*Effective use of info. * Error free *Effective information recall *Effective ergonomics *Multitasking(recall) *Whole scope of scheduling *Reflective, positive role modeling *Ethical *Effective *Competent and qualified person	*Effective use of info. * Error free *Effective information recall *Effective ergonomics *Multitasking(recall) *Whole scope of scheduling *Reflective, positive role modeling *Ethical *Effective *Competent and qualified person	*Effective use of info. * Error free *Effective information recall *Effective ergonomics *Multitasking(recall) *Whole scope of scheduling *Reflective, positive role modeling *Ethical *Effective *Competent and qualified person	*Effective use of info. * Error free *Effective information recall *Effective ergonomics *Multitasking(recall) *Whole scope of scheduling *Reflective, positive role modeling *Ethical *Effective *Competent and qualified person	*Effective use of info. * Error free *Effective information recall *Effective ergonomics *Multitasking(recall) *Whole scope of scheduling *Reflective, positive role modeling *Ethical *Effective *Competent and qualified person

RECOMMENDATIONS

Equipment:

Students expressed equipment quality concerns regarding the Bucket Trucks and Digger/Derricks owned by the program. In their opinion, newer equipment would facilitate learning. Students believe too much time is spent maintaining equipment and not enough time spent using the equipment. All other tools, materials, safety equipment, and facilities met their approval.

Rotating Faculty:

Student remarks were very strong and straight forward concerning the rotating faculty teaching methodology. In summary, it is their opinion that the objective of instructor rotation was implemented to provide students with an opportunity to experience varying instructor teaching styles, techniques and industry knowledge. Students do not believe the objective was accomplished. Students felt the time spent learning the new instructor expectations, teaching style and techniques hindered learning and wasted time that could have been better spent on other class projects.

ASSESSMENT

The Lineworker Rubric assessment tools that evaluate student's problem solving, hands on, leadership, crew work, and safety have only been in use for a short period, but they provide necessary feedback vital to the success of the program. The combination of the assessment tools, along with the Advisory Committee's assessment of students, will provide students and faculty with program feedback to support the current curriculum and identify strengths and weaknesses in the current curriculum. The outcomes should be used to evaluate the program success and make necessary curriculum changes. The data should be collected annually for evaluation for a minimum of three years before any curriculum changes are recommended.

EXEMPLARY ELEMENT

The WCCC Lineworker Program has a superior lab area that contains more than 150 Distribution and Transmission structures, including an updated underground system. An Advisory Committee assesses student abilities each semester that subsequently provides feedback to students and instructors that is used to facilitate learning and make curriculum recommendations. The Mesa Hotline School, held each May in the WCCC lineworker lab facility, offers the students attending a unique benefit and educational hands-on opportunity. Students meet Apprentices and Journeyman Lineman from utilities throughout the United States. The program has a low student attrition rate, a higher than national average certification rate, and experiences a high percentage of graduates that are employed in the lineworker industry.