

# Yavapai College

## ELT 212 Field Training 2

Spring Semester, 2015

<u>Course Number</u>	<u>Course Title</u>	<u>Section #</u>	<u>Lecture/Lab</u>	<u>Credits</u>
ELT 212	Field Training 2	10975	Lab	6

**Meeting times and dates:** ELT 212 meets Tuesdays, Wednesdays, and Thursdays, 9:30 a.m. to 12:30 p.m., starting Jan. 13 until Apr. 30

**Location of class:** The lab is located just north of Building 57 on Chino valley campus.

**Instructor:** Drew Lindsey

**Instructor contact information:** email: [drew.lindsey@yc.edu](mailto:drew.lindsey@yc.edu) . Phone: 928-717-7728 Cell 928-215-0147

**Office hours:** Mondays 8:00 a.m. to 1:00 p.m.

**Prerequisite:** ELT 211, and ELT 141 (may be taken concurrently)

**Course description:** Practice in the installation of electrical lines including transformers, reclosers and capacitor banks. Topics include rubber gloving, hot sticking techniques, and working on underground lines. Practice in the safe set-up and operation of equipment used in the line industry with a focus on the development of entry-level skills as drivers and operators. Includes procedures and practice in pole-top and bucket truck rescues.

**Course purpose:** This course is designed to expose students to the basics of line work, and convey knowledge of pole climbing, setting poles, electrical conductors, distribution voltages, insulators, protective grounds, rope and rigging, and distribution construction specifications.

**Required dress code:** Long sleeve shirts (preferably with collar) and denim jeans (not excessively loose fitting), and safety toe work boots with a defined heel will be required. Boots with a steel shank are recommended. If you do not have proper attire you may be asked to leave class.

### **Course content:**

1. Equipment used in the utility industry
2. Live-line work practices
3. Three-phase electrical line construction and installation
4. Pole-top rescues
5. Bucket truck rescues
6. Underground line construction and installation

**Learning outcomes:** Upon successful completion of this course the learner will be able to:

1. Identify the equipment used in the utility industry and demonstrate safe operating techniques for each. (1)
2. Identify and describe appropriate maintenance practices for keeping equipment in safe operating condition. (1)
3. Demonstrate the construction and installation of three-phase electrical line systems. (3)
4. Describe and demonstrate the procedures necessary for the maintenance of three-phase systems. (3)
5. Describe and demonstrate the procedures necessary for rubber-gloving and hot-sticking power lines. (2,3)
6. Describe and demonstrate the procedures necessary for a safe pole-top rescue. (4)
7. Describe and demonstrate the procedures necessary for a safe bucket-truck rescue. (5)
8. Demonstrate the construction and installation of underground power lines. (6)

Assessments:

#### Pole Climbing

- Pole top rescue
  - a. Possibility of 100 points
  - b. Pass/fail skill
  - c. Student will complete a pole top rescue on the dummy in **less than five minutes**.

#### Equipment Operation

- Digger derrick inspection.
  - a. Possibility of 10 points.
  - b. Points will be deducted for improper inspection.
- Digger derrick operation.
  - a. Possibility of 20 points.
  - b. Points will be deducted for unsafe or improper operation.
- Digger derrick driving.
  - a. Possibility of 10 points.
  - b. Points will be deducted for improper or unsafe operation.
- Trailer Backing
  - a. Student will complete the straight line trailer backing course.
  - b. Possibility of 30 points
  - c. 5 points will be deducted for every pull up.
  - d. 5 points will be deducted for every obstacle hit
- Trailer backing
  - a. Student will complete angled backing course
  - b. Possibility of 40 points
  - c. 5 points will be deducted for every pull up
  - d. 5 points will be deducted for every obstacle hit

- Bucket truck inspection.
  - a. Possibility of 10 points.
  - b. Points will be deducted for improper inspection.
- Bucket truck operation.
  - a. Possibility of 20 points.
  - b. Points will be deducted for unsafe or improper operation.
- Bucket truck driving.
  - a. Possibility of 10 points
  - b. Points will be deducted for unsafe or improper operation.
- CDL pre-trip inspection
  - a. Possibility of 50 points
  - b. Points will be awarded for completing the pre-trip inspection with 90% or better accuracy.
- Trencher operation.
  - a. Possibility of 20 points
  - b. Points will be deducted for unsafe or improper operation.
  - c. Points will be awarded based on outcome.

#### Line building skills

- Set and plumb pole.
  - a. Possibility of 10 points.
  - b. Points will be awarded based on outcome.
  - c. Points will be deducted for unsafe practices.
- Attach travelers and p-line for pulling wire.
  - a. Possibility of 10 points.
  - b. Points will be deducted for unsafe practices.
- Clip in running angle
  - a. Possibility of 10 points.
  - b. Points will be deducted for unsafe practices.
  - c. Points will be awarded based on neatness and quality.
- Hang and connect single phase transformer
  - a. Possibility of 10 points
  - b. Points will be deducted for unsafe practices.
  - c. Points will be awarded based on neatness and quality
- Build single phase secondary service
  - a. Possibility of 10 points
  - b. Points will be deducted for unsafe practices.
  - c. Points will be awarded based on neatness and quality.

- Build and connect a three phase transformer bank
  - a. Possibility of 30 points
  - b. Points will be awarded based on neatness and quality
  - c. Points will be deducted for unsafe practices.

#### Underground residential distribution

- Make up load break elbow.
  - a. Possibility of 30 points.
  - b. Points will be awarded based on neatness and quality.
- Pull in secondary wire.
  - a. Possibility of 10 points
  - b. Points will be awarded for completion and technique.
  - c. Points will be deducted for damaging conduit or wire insulation.

#### Hot line maintenance

- Hot insulator change out
  - a. Possibility of 20 points.
  - b. Points will be awarded for completion and technique.
  - c. Points will be deducted for unsafe practices.
  - d. Skill will be stopped and restarted if major safety violations occur.
- Hot pole change out
  - a. Possibility of 40 points.
  - b. Points will be awarded for completion and technique.
  - c. Points will be deducted for unsafe practices.
  - d. Skill will be stopped and restarted if major safety violations occur.
- Build three phase jumpers hot
  - a. Possibility of 30 points
  - b. Points will be awarded for completion and technique.
  - c. Points will be deducted for unsafe practices.

#### Bucket rescue

- Bucket rescue – Hurt man
  - a. Possibility of 50 points
  - b. Points will be awarded on safe completion and technique.
  - c. Points will be deducted for unsafe practices
- Bucket rescue – self rescue
  - a. Possibility of 50 points
  - b. Points will be awarded on safe completion and technique.
  - c. Points will be deducted for unsafe practices.

**Unsafe practices will be defined by the instructor before commencement of the skills assessment.**

### Point summary

<u>Grade</u>	<u>Percent</u>	<u>Total points</u>
A	90%-100%	567-630
B	80%-89%	504-566
C	70%-79%	441-503
D	60%-69%	378-440
F	0%-59%	0-377

**Disclaimer-** Any skill that cannot be completed due to inaccessibility of tools or equipment will be stricken from the list of assessments, and point totals will be recalculated to reflect the new total of possible points.

## Instructor and Institution Policies and Procedure

### **Student E-Mail & YC Portal**

Yavapai College requires enrolled students to have an e-mail address to which official College communications can be sent called 'Scholar'. In the best interest of effective communications management, this address resides on the College maintained e-mail system. The new student email system at Yavapai College is based on Microsoft Outlook Web Access (OWA), accessed the system by clicking on the email icon in the *myYC* Portal.

All Yavapai College instructors will communicate to student 'Scholar' emails with approved YC email addresses only, and shall communicate response time to student emails on their course syllabus.

Students are expected to check their Yavapai College e-mail account as directed by their instructor. If you need assistance, go to <http://www.yc.edu/content/myyc/emailinfo.htm>

Students may elect to forward their e-mail to an address different from their official Yavapai College account (see instructions on website), but assume full responsibility for reading e-mail at the forwarded location.

All Yavapai College students will be required to use the *myYC* Portal to register, add, or drop classes online at <http://my.yc.edu/>. First-time students will create a log-on username and password. Returning students will register and use the *myYC* Portal as well.

Instructor will make every effort to return e-mails prior to the start of the next class.

### **Internet Downloading:**

Yavapai College technological equipment and resources must be used in accordance with the Copyright Guidelines. Use of Yavapai College equipment and resources to illegally copy, download, access, print or store copyrighted material or download pornographic material is strictly prohibited. For example, file swapping of copyrighted material such as music or movies is strictly prohibited. Users found to violate this policy will have their privileges to use Yavapai College technological equipment and resources revoked.

### **Attendance:**

Regular attendance in class is mandatory. Turning in work when it is due is required. By following the syllabus, the student can finish the course by the end of the semester. Due to the rigorous nature of this course, attendance is vital for successful completion. A student who expects to be absent due to another school sponsored activity or compelling personal reason must make prior arrangements with the instructor – no exceptions! Attendance is not just showing up on time. Students are expected to pay attention while they are in class. The instructor reserves the right to remove students from class for reasons such as texting, sleeping or other disruptive behavior. A student who does not adhere to instructor and College attendance requirements may be dropped from the course as defined in the Yavapai College General Catalog.

### **Course Withdrawal:**

To officially withdraw from a course, the student must complete a Yavapai College Change of Class Enrollment Form and submit it to the Registration Office. Withdrawing from a course after the published deadline for withdrawal requires instructor approval and signature. When a student withdraws from a course, a “W” will appear on the student’s permanent college record. If a student does not follow official procedures for withdrawing from a course, failing grades will be posted on the student’s permanent record.

### **Course mentoring:**

Contact the course instructor during office or lab hours, through e-mail or phone to arrange for additional course assistance. Many student support services are also available to assist students in successful course completion.

### **Academic Integrity:**

Honesty in academic work is a central element of the learning environment. The presentation of another individual’s work as one’s own or the act of seeking unfair academic advantage through cheating, plagiarism or other dishonest means are violations of the College’s “Student Code of Conduct.”

**Any student found cheating will be asked to leave class immediately and awarded a failing grade. A “W” will NOT be an option...NO EXCEPTIONS! .**

### **Class behavior**

It is mandatory that all students show up ready to learn and do not disrupt the efforts of other students. Anyone found taking away from the ability of the class to learn will leave. Class starts at 9:30 a.m. If you plan to be late or miss class you may contact the instructor by email or phone. If a student shows up late without notice he may be told to leave class. The instructor reserves the right to remove any individual who is disrupting the potential for others to learn. Safety is always of our primary concern, and any individual who consistently or willfully ignores safety rules will be asked to leave the class.

### **Student Code of Conduct**

Respect for the rights of others and for the College and its property are fundamental expectations for every student. The “Code of Conduct” outlines behavioral expectations, and explains the process for responding to allegations of student misconduct.

Students are expected to respond and write in a professional and appropriate manner when activities are assigned to create scenarios, discuss opinions, present on a selected subject, or post to the web board. Inappropriate language or objectionable material will not be tolerated and could result in disciplinary measures and/or a failing grade for the class.

Web link for the Student Code of Conduct –

<http://www.yc.edu/v4content/student-services/code-conduct.htm>

### **Drug Free Environment**

Yavapai College's policy is to provide an environment free of drugs and alcohol. The use of illegal drugs and abuse of alcohol pose significant threats to health and can be detrimental to the physical, psychological, and social well-being of the user and the entire Yavapai College community, and is prohibited.

### **Tobacco Use**

Yavapai College is committed to limiting exposure to the harmful effects of primary and secondary smoke to campus students, visitors, and employees. If you use the facilities at Yavapai College, we comply with ASRS 36-301.01, Smoke Free AZ. Smoking is prohibited indoors and 25 feet from all doors, windows and vents.

In order to reduce the harmful effects of tobacco use and maintain a healthful working and learning environment, the district prohibits the use of tobacco except in specific areas. Tobacco use on college property is defined as lighted pipes, cigars, cigarettes, and the use of snuff and smokeless tobacco in any form.

#### **Disability Resources:**

Yavapai College is committed to providing educational support services to students with documented disabilities. Accommodations for a student must be arranged by the student through the Disability Resources Coordinator (Prescott Campus: 928.776.2079 or Verde Valley Campus: 928.634.6563).

#### **Cell Phone, Pages & Texting:**

Yavapai College is committed to providing a quality learning environment. All cell phones and pagers must be placed in a non-audible mode while in classrooms, computer labs, the library, the learning center, and testing areas. Cell phones and pagers must be used outside these facilities.

If a cell phone or any other mobile device becomes a potential distraction the instructor reserves the right to remove the student from class.

#### **Other Instructor Procedures**

Any student found mishandling the equipment in the lab will be removed from class. If any student has questions make sure to ask, either in person or in an email. Please refer to the Course Calendar for specific dates and times of class and holidays. The course calendar can be found on Blackboard under the syllabus tab.

Attendance for this class is mandatory. Any student with more than six unexcused absences may be dropped from this course. Unexcused tardiness will be considered an absence. Permission must be granted by the instructor **before the beginning of class** for an excused absence. My cell number is 928-215-0147. Text message is the preferred method of correspondence in this matter.