Oklahoma State University Institute of Technology
Face-to-Face Common Syllabus
FALL 2019

HVLP 2553 UNDERGROUND DISTRIBUTION SYSTEMS – CRN - 60241
While similar in nature to overhead systems, an underground system has its own requirements. Construction techniques, tools and equipment and traffic control are given extensive coverage. Troubleshooting maintenance and care of personal equipment are covered with special emphasis on safety. Students work with various types of material and equipment.

Course Purpose: To introduce students, on how underground and overhead work in the same principals.

Type of Course: (Theory/Lab)
Credit Hours: 3; Total clock hours of theory per semester: 25;
Total clock hours of lab per semester: 50.

Class Length: 1st Half
Class Days and Times: MTWRF 7:30am – 9:35am
Prerequisites: HVLP 2483

Instructor Name: Pete Salter
Instructor Phone: (405) 567-9258
Instructor Email: psalter@okstate.edu

Office: Bldg. 600 Room # 2

Contact: My preferred method of contact is Email. Please allow 24-48 hours to return your correspondence during the normal work week.

Instructor's Office Hours: 12:00pm – 1:00pm.

School Name: Engineering & Construction Technologies
School Main Phone: 918-293-4742

Required Text, References, and Materials
Texts: Lineman’s and Cableman’s Handbook by Kurtz, Shoemaker & Mack
ISBN#978-0-07-174258-0

References: None

Materials: Three Ring Binder and Notebook Paper Only, Writing Utensils, Calculator or cell phone

Uniform/Tools: Climbing tools, Safety Glasses, Leather Gloves, Hard Hat and Pocket Knife

Estimated Cost for Materials: $ 0
Estimated Cost for Uniform/Tools: $ 120.00
Optional Resources: None
Upon completion of the course, students should:

<table>
<thead>
<tr>
<th>Course Objectives</th>
<th>Assessment of Objectives</th>
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</thead>
<tbody>
<tr>
<td>Understand an underground electrical system layout and construction. Use prints and maps of URD service areas</td>
<td>Answer questions about the various types of underground electrical systems based on information given to them by company specs. and maps.</td>
</tr>
<tr>
<td>Understand the safety problems involved in such systems and the process it involves to safely resolve them.</td>
<td>Be able to recognize potential safety problems when working on underground networks.</td>
</tr>
<tr>
<td>Know and understand how to use the special tools involved in underground networks.</td>
<td>Demonstrate the proper use and care of tools used on underground systems.</td>
</tr>
<tr>
<td>Learn how to install load break elbows, terminations and splices to underground primary and secondary cables</td>
<td>Be able to properly and safely install load break elbows, terminations and splices on high voltage cables.</td>
</tr>
<tr>
<td>*Install primary and secondary service to pad mount transformer</td>
<td>Observation Assessment</td>
</tr>
<tr>
<td>*Prepare underground splice, elbow and outside terminations</td>
<td>Observation Assessment</td>
</tr>
</tbody>
</table>

Aspects of the course objective assessments may be used in the university’s assessment of student learning. If applicable, an asterisk (*) above indicates this assignment is used in the university assessment program.

**Course Activities**

In this course students will:

- Participate in class discussions and activities.
- View videos that depict the various concepts.
- Contribute to a course Service Learning project.
- Participate in group and individual presentations.
- Compile a portfolio of work produced.
- Take examinations.
- Complete reading assignments.
- May be required to do quizzes.
Evaluation - Grades will be based on the quality and completion of these tasks:

<table>
<thead>
<tr>
<th>Task</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance &amp; Participation</td>
<td>20%</td>
</tr>
<tr>
<td>Unit Tests</td>
<td>30%</td>
</tr>
<tr>
<td>Essays &amp; Reports</td>
<td>20%</td>
</tr>
<tr>
<td>Final Test</td>
<td>30%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

*The student’s grade for this assignment will be used in the university’s assessment of student learning. A 70% competency or higher receives a Pass rating. This Pass/Fail rating is independent of the student’s course grade.

Daily and/or weekly quizzes, small weekly assignments and similar type projects: Normal return time to student by next class meeting or no later than one (1) week.

Extensive assignments, large lab projects, extensive quizzes, exams and similar type projects: Normal return time to students in one (1) to two (2) weeks.

**Recommended Student Competencies/Skills**

None.

**Authorized Tools**

None

**Late Work**

No late work will be accepted, unless excused absence; like jury duty, military duty, required activities in another department and death in immediate family. Be sure to always contact me before class.

**Testing**

Students are expected to cooperate in maintaining a classroom environment conducive to learning. Courteous and respectful behavior will be expected from all students each day.

**Other Lab and Classroom Policies**

**Attire**; proper attire will be worn to safety class. Work pants (NO SHORT PANTS OF ANY TYPE!),

**Proper** T-Shirt or long sleeve shirt (NO SLEEVE LESS SHIRT EVER!), Long sleeve shirt will be worn while climbing, Work boots. Hats will be removed during class. Climbing tools/equipment, hand tools, hard hats, safety glasses, leather gloves, and boots.

**Pay particular attention to #12 #13 on the following list.** Thank you! HVLP Instructors, OSUIT. #1…No cursing at all! Inside or outside

#2…Long sleeve shirt when climbing and in bucket truck

#3…Hard hat, safety glasses, work gloves at all times

#4…Rubber gloves, sleeves and lanyard when in the bucket
#5…Rubber gloves and fall restraint when climbing
#6…Check and inspect all poles before climbing and working out bucket truck
#7…Work boots and pants, in class and outside
#8…No call, text or e-mail in if you are going to be late or not coming to class
#9…At least a pair of Klein’s, channel locks or crescent on your person at all times when doing outside labs
#10…When vehicles are being backed, a person or persons will be backing the driver at all times
#11…No tobacco, drugs or alcohol
#12…No Pole Yard activities allowed (no pole climbing) from 7:30 am to 7:30 am the following day, unless OSUIT High Voltage Lineman Faculty is onsite and has given permission for that activity, which would be for that one time & that date.
#13 STRICKLY ENFORCED when climbing our safety policy is 100% tied off 100% of the time.

Syllabus Attachment
View the Syllabus Attachment, which contains other important information, by visiting
https://osuit.edu/center/files/19-20-syllabus-attachment.pdf

<table>
<thead>
<tr>
<th>Course Schedule</th>
<th>Topic</th>
<th>Assignment</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day/Week 1</td>
<td>Syllabus</td>
<td>Read over syllabus, and what we will be doing in class.(Test )</td>
<td>Entire Week</td>
</tr>
<tr>
<td>Day/Week 2</td>
<td>Talk about underground Materials, unit test.</td>
<td>Inside and outside labs</td>
<td>11-8-19</td>
</tr>
<tr>
<td>Day/Week 3</td>
<td>Preform different types of Terminations on cables.</td>
<td>Inside and outside labs</td>
<td>11-15-19</td>
</tr>
<tr>
<td>Day/Week 4</td>
<td>Install underground transformers. Essays &amp; Reports</td>
<td>Inside and outside labs, Essays and reports. Unit test.</td>
<td>11-22-19</td>
</tr>
<tr>
<td>Day/Week 5</td>
<td>Install underground transformers. Essays &amp; Reports</td>
<td>Inside and outside labs, Essays and reports. Unit test.</td>
<td>11-29-19</td>
</tr>
<tr>
<td>Day/Week 6</td>
<td>Install splices on primary cables, run dip poles, and digging with tractor.</td>
<td>Inside and outside labs Unit test Study and review for Final</td>
<td>12-6-19</td>
</tr>
<tr>
<td>Day/Week 7</td>
<td>Install splices on secondary cables</td>
<td>Inside and outside labs Study and review for Final Test</td>
<td>12-13-19</td>
</tr>
<tr>
<td>Day/Week 8</td>
<td>Install splices on secondary cables</td>
<td>Final Test</td>
<td>12-13-19</td>
</tr>
</tbody>
</table>

Schedule is subject to change at instructor discretion.