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

HVLP 2673 Transmission Principles – CRN - 60247
An in-depth study of construction techniques, tools, equipment, and care of personal protective
equipment used in transmission construction, which includes building and maintaining different
transmission structures. Students learn the skills required for hot-sticking at different voltages
69Kv to 138Kv lines using hook-ladders and baker-boards.

Course Purpose:
This hands on course emulates industry in its labs building Transmission line using the
equipment used in transmission construction. Students learn safe work practices working with
high voltage and extra high voltage.

Type of Course: Theory/Lab
Credit Hours: 3; Total clock hours of theory per semester: 20;
Total clock hours of lab per semester: 55; Total clock hours of clinical per semester: 0.
Class Length: 2nd half
Class Days and Times: MTWRF 7:30 – 9:35am
Prerequisites: HVLP 2483

Instructor Name: Barton Pettit  
Office: Bldg. 600 Room 102
Contact: My preferred method of contact is e-mail. Please allow 24-48 hours to return your
correspondence during the normal work week.

Instructor's Office Hours: 1:00 – 3:30pm MTWRF

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

Required Text, References, and Materials

Texts: The Lineman’s And Cableman’s Handbook, Thirteenth Edition
ISBN #978-0-07-185003-2
Distribution Transformers, Alexander Publications
ISBN # N/A

References: As provided by Instructor

Materials: Materials needed including notebooks, writing utensils, project supplies,
data storage devices, tools, etc.

Uniform/Tools: Trade appropriate clothing; Dress for outside work; Long sleeves, boots,
tool belt, hooks and hand tools. Tools as required by HVLP

Updated: August 2019
Estimated Cost for Materials: N/A
Estimated Cost for Uniform/Tools: N/A
Optional Resources: None

Upon completion of the course, students should:

<table>
<thead>
<tr>
<th>Course Objectives</th>
<th>Assessment of Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>*6.1 Know the different between Distribution and Transmission voltages.</td>
<td>Observation Assessment-2673</td>
</tr>
<tr>
<td>*6.2 Prepare different structures on ground and in the air.</td>
<td>Observation Assessment-2673</td>
</tr>
<tr>
<td>*6.3 Perform different grounding methods.</td>
<td>Observation Assessment-2673</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.
- Participate in group and individual presentations.
- 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>Attendance and Participation</th>
<th>10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit Tests</td>
<td>20%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>10%</td>
</tr>
<tr>
<td>Lab</td>
<td>20%</td>
</tr>
<tr>
<td>Final Test</td>
<td>40%</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**

Pole Climbing

**Authorized Tools**

Trade specific tools for this course are those previously purchase for prerequisite courses. Students may use any/all course materials, including books and notes, while participating in classroom activities.

**Late Work**

No late work accepted without prior permission of instructor and only for excused absence as outlined in this syllabus. Quizzes cannot be made up.

**Testing**

Test will be in classroom, or outside assessment test. All quizzes and written assignments are to be completed independently; no collaboration with classmates is permitted and any instance of such will be considered academic dishonesty. Students must take all quizzes to qualify for final test. Quizzes will be given at the start of each class, make up quiz will be a climbing exercise determined by the instructor.

**Other Lab and Classroom Policies**

Be on time ready to work with all your tools, proper clothing, your books, classroom materials.

Lab projects will be timed and must be completed by every student.

Student assessments will be based on:

- Following instructions in class and lab
- Proper completion of lab projects
- Punctuality and attendance
- Projects will be timed and graded accordingly.

Pop quizzes may be given at any time and without notice. If a pop quiz is given, a grade of zero will be given to those students not present at the time the quiz was given.

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.

**Syllabus Attachment**

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

- Quiz could be given anytime & will be on subjects/labs that have been covered
- All outside lab days will be Monday thru Friday unless told different or because of weather conditions.

<table>
<thead>
<tr>
<th>Course Outline Schedule</th>
<th>Topic</th>
<th>Assignment</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Go over Syllabus, material and tools, Power Plants, HV and EHV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 2</td>
<td>Hot Sticks, Baker Board and Hook Ladders</td>
<td>Lab &amp; Quizzes</td>
<td>Days 1-5</td>
</tr>
<tr>
<td>Week 3</td>
<td>Insulators, and Bundled conductors</td>
<td>Lab &amp; Quizzes</td>
<td>Days 1-5</td>
</tr>
<tr>
<td>Week 4</td>
<td>Read and discuss Substations and their function within the power grid, You Tube Transmission</td>
<td>Unit Test, CD test, Quizzes</td>
<td>Day 1, Day 2, Days 1-5</td>
</tr>
<tr>
<td>Week 5</td>
<td>Change out Insulators with Hot Sticks, Transmission Voltages, Transmissions Videos</td>
<td>Unit Lab, quizzes, &amp; Unit Test</td>
<td>Days 1-5</td>
</tr>
<tr>
<td>Week 6</td>
<td>Test, Transmission Video’s, Baker Board Change out Dead-end Insulators</td>
<td>Unit Test</td>
<td>Day 1, Day 1-5</td>
</tr>
<tr>
<td>Week 7</td>
<td>Material Review, and 765 KV EHV Lines, review for Finals</td>
<td>Final Test</td>
<td>Last scheduled day of class</td>
</tr>
</tbody>
</table>

Schedule is subject to change at instructor discretion.