Fond du Lac Tribal and Community College
COURSE OUTLINE FORM

Updated 9/23/14

Please return this form to the college vice president of academic affairs and the chairperson of the Academic Affairs and Standards Council (AASC)

1. Prepared by:_____

2. Date submitted:_____

3. Date approved: 01/21/04 Date revised 09/23/14

4. Department/discipline: Electric Utility Technicians

5. Department(s) endorsement(s):_____
(Signatures of the person(s) providing the endorsement are required.)

6. Course Title: Transmission and Distribution and Metering of Power
Abbreviated course title (25 characters or less):_____

7. Course Designator: EUT 8. Course Level: 1030 9. 2XXX

10. Number of Credits: Lecture 3 Lab 1

11. Control Number (on site) 20 Control Number (online)_____

12. Catalog/Course description:

In this course, the student will be introduced to transmission, distribution, and metering systems used in the electric power industry. The electrical equipment, the theory of operations, system behavior, and other topics will be introduced through hands-on learning activities so that the student will acquire knowledge and skills to be able to enter into industry apprenticeship programs. (Prerequisite: EUT 1020 Basic Electricity, EUT 1021 AC Electricity for Electric Utility Technicians. Co-requisite: MATH 1010 College Algebra)

13. Course prerequisite(s) or co-requisite(s): Accuplacer scores/ Other courses

Prerequisite(s): EUT 1020 Basic Electricity
EUT 1021 AC Electricity for Electric Utility Technicians

Co-requisites: Math 1010 College Algebra

14. **Course Materials (**Recommended course materials and resources. List all that apply, e.g. textbooks, workbooks, study guides, lab manuals, videos, guest lecturers).

Texts are being selected by instructor. If applicable. Texts to be determined yearly on the basis of content and availability and will be listed on the syllabus.

Study guides and lab manuals will be supplied to the student.
Specialized lab equipment and lab facilities will be provided to the student.

15. **Course Content** (Provide an outline of major topics covered in course)

a. Three-phase AC Power Systems
b. Electrical Safety

c. Transformers, Regulators, and Capacitors
d. Transmission and Distribution of Power
e. Power System Dynamics
f. Reclosures, Protective Equipment and Fault Analysis
g. Metering
h. Schematics

16. **Learning Goals, Outcomes, and Assessment**
At FDLTCC we have 4 Competencies Across the Curriculum (CAC) areas. They are as follows:

A. Information Literacy (the ability to use print and/or non-print tools effectively for the discovery, acquisition, and evaluation of information)
B. Ability to Communicate (the ability to listen, read, comprehend, and/or deliver information in a variety of formats.)
C. Problem Solving (the ability to conceptualize, apply, analyze, synthesize, and/or evaluate information to formulate and solve problems.)
D. Culture (knowledge of Anishinaabe traditions and culture, knowledge of one's own traditions and culture, knowledge of others' traditions and cultures, culture of work, culture of academic disciplines and/or respect for global diversity.)

Upon completion of this course the student will be able to:
1. Solve problems of phase and impedance (C)
2. Connect transformer in a 3 phase systems (C)
3. Connect metering systems in a 3 phase systems (C)
4. Read schematic diagrams of power systems (C)

17. **Minnesota Transfer Curriculum (MnTC):** If this course fulfills an MnTC goal area, state the goal area and list the goals and outcomes below:

See www.mntransfer.org

Goal Area(s):_____
Goal and Outcomes: