ELPT 1345 - Commercial Wiring

Course Syllabus: Spring 2017
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Please use NTCC email for all off-class hours' correspondence.

	Monday	Tuesday	Wednesday	Thursday	Friday
Instructors Office Hours	8-3	8-3	8-3	8-3	8-3

The information contained in this syllabus is subject to change without notice. Students are expected to be aware of any additional course polices presented by the instructor during the course.

Catalog Course Description:

Three Credit Hours. Commercial Wiring includes print reading, branch circuit wiring for all areas of a building, overcurrent protection, service entrance, proper grounding techniques, panel board installation, conduit bending, NEC codes, and associated safety procedures.

Course Days and Times:

Course will be two days a week Tuesday and Thursday, from 6:00pm till 9:00 pm.

Required Textbook(s):

ELECTRICAL WIRING COMMERCIAL 16TH Edition
Phil Simmons & Ray C. Mullin

Recommended/Required Reading:

Weekly reading assignments will be from the text book along with end of chapter review questions that must be answered and completed on time. Students can make a copy of review questions/answers to turn into the Instructor. Other resources will be used. Class notes must be taken during instructor lecture.

Instructor Resources:

Your instructor can be a great resource. Your instructor is here to assist you in learning the material and helping you earn the grade you want in the course. This is a commitment by your instructor. Please utilize this resource by contacting him with any matter you feel he can assist you with, both within this class or your college success in general. It is your responsibility to

learn the material, but this can be best accomplished by initiating contact with the instructor on topics you need clarification or further assistance. Please do this!

Student Learning Outcomes:

1. Students will demonstrate an understanding of how the NEC is organized and how the articles relate. Students will understand **Safety** rules and regulations regarding electrical troubleshooting, new installation, and working with electricity. *All NTCC safety, class, NEC, and other electrical rules and regulations will be enforced, and students will be required to abide by them. Regular Safety Meetings will be held.*
2. Students will demonstrate an understanding of how to read and interpret electrical symbols used in construction drawings.
3. Students will demonstrate an understanding of how to determine minimum lighting, receptacle loading for a given area. Tabulate the unbalanced or neutral load. Apply factors for continuous loads where appropriate.
4. Students will demonstrate the required number of branch circuits for a set of loads. Apply adjustment and correction factors, determine the correct rating for branch-circuit protective devices, determine the required minimum size conductor for a branch circuit.
5. Students will demonstrate an understanding of switches and receptacles with the proper rating, install various types of receptacles correctly, connect single pole, 3-way, 4-way, and 2-pole switches to control circuits.
6. Students will demonstrate how to select the proper raceway or cable for the conditions, identify the installation requirements for a raceway, select the proper size of pull, and junction boxes.
7. Students will be able to determine branch-circuit and feeder ratings and conductor sizes for motors, determine the appropriate overcurrent protection for motors.
8. Students shall be able to calculate the feeder loading, determine feeder conductor size.

Class Lectures, Labs, and Discussions

Date	Week	Topic(s)
1/17 – 1/19	1	Safety, Commercial Building Plans and Specifications
1/24 – 2/2	2	Reading Electrical Drawings – Entry Level
2/7 – 2/9	3 - 4	Calculating the Electrical Load
2/14 – 2/16	5 - 6	Branch Circuits, Switches and Receptacles
2/ 21– 2/23	5	Wiring Methods
2/28 & 3/2	6	Lab circuit wiring
3/7 & 3/9	7	Motor and Appliance Circuits
3/13 & 3/17	8	Spring Break
3/21 & 3/23	9	Branch Circuits & Feeders
3/28 & 3/30	10	Motors, Motor Controls

4/4 & 4/6	11	Emergency Power
4/11 & 4/13	12	Hazardous Locations
4/18 & 4/20	13	Pools & Foundations
4/25 & 4/27	14	Maintenance & Troubleshooting
5/2 & 5/4	15	Lab - Review
5/9/17	16	Final Exam

Tools:

All tools in the Lab are supplied by NTCC. No additional tool purchase is required. Students are required to respect school tools and replace them in designated area, clean and in proper working order. Students are not allowed to remove tools from the Lab area.

General Classroom and Lab Polices:

The Electrical Occupations Program, like most other vocational programs, has policies that must be followed. These policies will give you the student a better opportunity to learn and create a safe environment for all to work in.

1. Students are not permitted to use instructor's tools at any time.
2. Students are not permitted to use shop or office phones.
3. Students are not permitted to enter any instructor's office unless accompanied by an Electrical Occupations Faculty member. No Exception!
4. All phones and PDAs must be turned off during class and lab.
5. No eating, drinking, or tobacco use in class or lab. During breaks only.
6. No open toed shoes (sandals or flip flops) in shop area. Extremely long hair must be kept up.
7. Students will be required to wear a pair of safety glasses, at all times, while in shop area.

Class Attendance:

Regular and punctual attendance at all scheduled classes is expected. Attendance is necessary for successful completion of course work. Each class will build upon the other. Knowledge in the electrical field is a process, material covered in each class will help the student to build their knowledge base and help them understand future electrical material. Part of your grade will be on attendance and punctuality. **More than three absences are considered excessive**. **It is up to the student to initiate a drop in the Office of Admissions and Records.**

Class/Homework:

All homework and in-class/lab assignments must be turned in on due date. Late work must be arranged with the instructor prior to due date. **25 points will be deducted for each day assignment is late.**

Evaluation and Grading:

Grades you will receive for this class will be based upon these areas:

1. 50% -Test questions will include: Class Notes, Text Material, assigned reading & DVD.
2. 40% -Written assignments and Lab: Graded on Content, Legibility, & Organization.

Quality of Work	Attitude toward co-workers
Care of tools	Following Instructions
Use of Materials	Responsibility
Use of Time	Independence
Attitude toward Supervision	Attendance and Punctuality

3. 10% -Instructor discretion
   This is based on your mechanical abilities, problem solving abilities in relationship to diagnostics and overall class participation.

The letter grade is based on the following grading scale:

89.5% - 100% = A

79.5% - 89.4% = B

69.5% - 79.4% = C

59.5% - 69.4% = D

0 – 59.4% = F

Exams/Test:

There will be written test during the duration of the course, including the final. There will be lab/shop tests where students will demonstrate different conduit bends and wiring.

Academic Ethics/Dishonesty

The college and your instructor expect all students to engage in academic pursuits in a manner that is beyond reproach. Students are expected to maintain complete honesty and integrity in their academic pursuits. Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and may result in disciplinary action.

Students are expected to complete all course work in an honest manner, using their intellects and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. **NTCC upholds the highest standard of academic integrity. This course will follow the NTCC Academic Honesty policy stated in the Student Handbook.**

ADA Statement:

It is the policy of NTCC to provide reasonable accommodations for qualified individuals who are students with disabilities. This College will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student's responsibility to arrange an appointment with a College counselor to obtain a Request for Accommodations form. For more information, please refer to the NTCC Catalog or Student Handbook.

SCANS Skills:

This course addresses the Secretaries Commission on Achieving Necessary Skills (SCANS). By successfully demonstrating mastery of the Student Learning Outcomes listed above, the student will have addressed the following SCANS competencies:

C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20

F1, F2, F3, F4, F5, F5, F6, F7, F8, F9, F10, F11, F12, F13, F14, F15, F16, F17

Please see the following web site: http://wdr.doleta.gov/SCANS/whatwork/whatwork.pdf

Family Educational Rights and Privacy Act (FERPA)

The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents certain rights with respect to their children's educational records. These rights transfer to the student when he or she attends a school beyond the high school level. Students to whom the rights have transferred are considered "eligible students." In essence, a parent has no legal right to obtain information concerning the child's college records without written consent of the student. In compliance with FERPA, information classified as "directory information" may be released to the general public without the written consent of the student unless the student makes a request in writing. Directory Information is defined as: the student's name, permanent address and/or local address, telephone listing, dates of attendance, most recent previous educational institution attended, other information including major, field of study, degrees, awards received, and participation in officially recognized activities/sports.

I HAVE READ THE SYLLABUS FOR THIS COURSE AND UNDERSTAND WHAT IS REQUIRED TO PASS. I UNDERSTAND THE EVALUATION AND GRADING POLICIES IN THIS COURSE. I WILL FOLLOW ALL SAFETY AND CLASSROOM POLICIES BOTH WRITTEN AND VERBAL. ALL QUESTIONS I HAD WERE ANSWERED BY THE INSTRUCTOR TO MY SATISFACTION.

COURSE ELPT 1345

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Student Signature Date