



## ELTR 1080 Commercial Wiring 1 COURSE SYLLABUS Summer Semester 2018

### COURSE INFORMATION

Credit Hours/Minutes: 5/4500

Campus/Class Location: Main 429

Class Meets: MTWR 8:00-10:30AM

Course Reference Number (CRN):60045

### INSTRUCTOR CONTACT INFORMATION

Instructor Name: Randy Robinson

Email Address: [Randy.Robinsonrrobinson@southeasterntech.edu](mailto:Randy.Robinsonrrobinson@southeasterntech.edu)

Campus/Office Location: Vidalia Main Bldg. Room 429

Office Hours: 2:00-4:00PM MTWR

Phone: 912-538-3137

Fax Number: 912-538-3156

Tutoring Hours: By Appt.

### SOUTHEASTERN TECHNICAL COLLEGE'S (STC) CATALOG AND HANDBOOK

Students are responsible for all policies and procedures and all other information included in Southeastern Technical College's [Catalog and Handbook](http://www.southeasterntech.edu/student-affairs/catalog-handbook.php) (<http://www.southeasterntech.edu/student-affairs/catalog-handbook.php>).

### REQUIRED TEXT

- **NEC 2014 Code Spiral Bound**, Published by NFPA, Distributed by Builders Book, ISBN: 9781455906734
- **Commercial Wiring Trainee Guide** by NCCER, Pearson Publishers ISBN 978-1-269-83001-0

### REQUIRED SUPPLIES & SOFTWARE

Paper and pencil. Tools and safety glasses; 2GB or larger USB jump drive.

**Students should not share login credentials with others and should change passwords periodically to maintain security.**

### COURSE DESCRIPTION

Introduces commercial wiring practices and procedures

### MAJOR COURSE COMPETENCIES

Topics include: industrial safety procedures, the National Electrical Code, principles of grounding and bonding, commercial services, three-phase power systems, and electric motor fundamentals.

## **PREREQUISITE(S)**

None

## **COURSE OUTLINE**

1. Industrial Safety Procedures
2. National Electric Code
3. Principles of Grounding and Bonding
4. Commercial Services
5. Three-Phase Power Systems
6. Electric Motor Fundamentals

## **GENERAL EDUCATION CORE COMPETENCIES**

Southeastern Technical College has identified the following general education core competencies that graduates will attain:

1. The ability to utilize standard written English.
2. The ability to solve practical mathematical problems.
3. The ability to read, analyze, and interpret information.

## **STUDENT REQUIREMENTS**

Electrical Systems technology students must earn a minimum grade of C in this course.

## **ATTENDANCE GUIDELINES**

Class attendance is a very important aspect of a student's success. Being absent from class prevents students from receiving the full benefit of a course and also interrupts the learning process. Southeastern Technical College considers both tardiness and leaving early as types of absenteeism. Responsibility for class attendance rests with the student. Regular and punctual attendance at all scheduled classes is required for student success. Students will be expected to complete all work required by the instructor as described in the individual course syllabus.

Instructors have the right to give unannounced quizzes/assignments. Students who miss an unannounced quiz or assignment will receive a grade of 0. Students who stop attending class, but do not formally withdraw, may receive a grade of F and face financial aid repercussions in upcoming semesters.

Instructors are responsible for determining whether missed work may be made up and the content and dates for makeup work is at the discretion of the instructor.

Students will not be withdrawn by an instructor for attendance; however, all instructors will keep records of graded assignments and student participation in course activities. The completion dates of these activities will be used to determine a student's last date of attendance in the event a student withdraws, stops attending, or receives an F in a course.

## **SPECIAL NEEDS**

Students with disabilities who believe that they may need accommodations in this class based on the impact of a disability are encouraged to contact [Helen Thomas \(hthomas@southeasterntech.edu\)](mailto:hthomas@southeasterntech.edu), 912-538-3126, to coordinate reasonable accommodations.

## **SPECIFIC ABSENCES**

Provisions for Instructional Time missed because of documented absences due to jury duty, military duty, court duty, or required job training will be made at the discretion of the instructor.

## **PREGNANCY**

Southeastern Technical College does not discriminate on the basis of pregnancy. However, we can offer accommodations to students who are pregnant that need special consideration to successfully complete the course. If you think you will need accommodations due to pregnancy, please advise me and make appropriate arrangements with [Helen Thomas \(hthomas@southeasterntech.edu\)](mailto:hthomas@southeasterntech.edu), 912-538-3126.

## **WITHDRAWAL PROCEDURE**

Students wishing to officially withdraw from a course(s) or all courses after the drop/add period and prior to the 65% portion of the semester (date will be posted on the school calendar) must speak with a Career Counselor in Student Affairs and complete a Student Withdrawal Form. A grade of "W" (Withdrawn) is assigned when the student completes the withdrawal form from the course.

Students who are dropped from courses due to attendance (see your course syllabus for attendance policy) after drop/add until the 65% point of the semester will receive a "W" for the course. Abandoning a course(s) instead of following official withdrawal procedures may result in a grade of "F" being assigned.

After the 65% portion of the semester, the student will receive a grade for the course. (Please note: A zero will be given for all missed assignments.)

There is no refund for partial reduction of hours. Withdrawals may affect students' eligibility for financial aid for the current semester and in the future, so a student must speak with a representative of the Financial Aid Office to determine any financial penalties that may be assessed due to the withdrawal. All grades, including grades of 'W', will count in attempted hour calculations for the purpose of Financial Aid.

**Remember** - Informing your instructor that you will not return to his/her course does not satisfy the approved withdrawal procedure outlined above.

## **MAKEUP GUIDELINES (TESTS, QUIZZES, HOMEWORK, PROJECTS, ETC.)**

Extenuating circumstances are determined at the instructor's discretion. Unless otherwise scheduled with the instructor, it is expected that the test will be taken the next day, scheduled outside of regular class time. Failure to follow this procedure will result in a grade of zero.

## **ACADEMIC DISHONESTY POLICY**

The Southeastern Technical College Academic Dishonesty Policy states that all forms of academic dishonesty, including but not limited to cheating on tests, plagiarism, collusion, and falsification of information, will call for discipline. The policy can also be found in the Southeastern Technical College Catalog and Handbook.

## **PROCEDURE FOR ACADEMIC MISCONDUCT**

The procedure for dealing with academic misconduct and dishonesty is as follows:

### **1. First Offense**

Student will be assigned a grade of "0" for the test or assignment. Instructor keeps a record in course/program files and notes as first offense. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus. The Registrar will input the incident into Banner for tracking purposes.

### **2. Second Offense**

Student is given a grade of "WF" (Withdrawn Failing) for the course in which offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of second offense. The Registrar will input the incident into Banner for tracking purposes.

### 3. Third Offense

Student is given a grade of "WF" for the course in which the offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of third offense. The Vice President for Student Affairs, or designee, will notify the student of suspension from college for a specified period of time. The Registrar will input the incident into Banner for tracking purposes.

### STATEMENT OF NON-DISCRIMINATION

The Technical College System of Georgia and its constituent Technical Colleges do not discriminate on the basis of race, color, creed, national or ethnic origin, sex, religion, disability, age, political affiliation or belief, genetic information, disabled veteran, veteran of the Vietnam Era, spouse of military member or citizenship status (except in those special circumstances permitted or mandated by law). This school is in compliance with Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color, or national origin; with the provisions of Title IX of the Educational Amendments of 1972, which prohibits discrimination on the basis of gender; with the provisions of Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination on the basis of handicap; and with the American with Disabilities Act (ADA).

The following individuals have been designated to handle inquiries regarding the nondiscrimination policies:

<b>American With Disabilities Act (ADA)/Section 504 - Equity- Title IX (Students) – Office of Civil Rights (OCR) Compliance Officer</b>	<b>Title VI - Title IX (Employees) – Equal Employment Opportunity Commission (EEOC) Officer</b>
Helen Thomas, Special Needs Specialist Vidalia Campus 3001 East 1 <sup>st</sup> Street, Vidalia Office 108 Phone: 912-538-3126 Email: <a href="mailto:hthomas@southeasterntech.edu">Helen Thomas</a> <a href="mailto:hthomas@southeasterntech.edu">hthomas@southeasterntech.edu</a>	Lanie Jonas, Director of Human Resources Vidalia Campus 3001 East 1 <sup>st</sup> Street, Vidalia Office 138B Phone: 912-538-3230 Email: <a href="mailto:ljonas@southeasterntech.edu">Lanie Jonas</a> <a href="mailto:ljonas@southeasterntech.edu">ljonas@southeasterntech.edu</a>

### ACCESSIBILITY STATEMENT

Southeastern Technical College is committed to making course content accessible to individuals to comply with the requirements of Section 508 of the Rehabilitation Act of Americans with Disabilities Act (ADA). If you find a problem that prevents access, please contact the course instructor.

### GRIEVANCE PROCEDURES

Grievance procedures can be found in the Catalog and Handbook located on Southeastern Technical College's website.

### ACCESS TO TECHNOLOGY

Students can now access Blackboard, Remote Lab Access, Student Email, Library Databases (Galileo), and BannerWeb via the mySTC portal or by clicking the Current Students link on the [Southeastern Technical College \(STC\) Website \(www.southeasterntech.edu\)](http://www.southeasterntech.edu).

### TECHNICAL COLLEGE SYSTEM OF GEORGIA (TCSG) GUARANTEE/WARRANTY STATEMENT

*The Technical College System of Georgia guarantees employers that graduates of State Technical Colleges shall possess skills and knowledge as prescribed by State Curriculum Standards. Should any graduate employee within two years of graduation be deemed lacking in said skills, that student shall be retrained in any State Technical College at no charge for instructional costs to either the student or the employer.*

**GRADING POLICY**

<b>Assessment/Assignment</b>	<b>Percentage</b>
Module Test	40%
Review Questions	10%
Performance Evaluations	10%
Lab Work	40%

**GRADING SCALE**

<b>Letter Grade</b>	<b>Range</b>
A	90-100
B	80-89
C	70-79
D	60-69
F	0-59

## ELTR 1080 Commercial Wiring 1 Summer Semester 2018 Lesson Plan

Date/Week	Chapter/Lesson	Content	Assignments & Tests Due Dates	Competency Area
May 15- May 24/ Weeks 1-2	Grounding and Bonding- Module 26209-14	<ul style="list-style-type: none"> <li>• Explain the purpose of grounding and bonding and the scope of NEC Article 250</li> <li>• Define the National Electrical Code® requirements related to bonding and grounding</li> </ul>	<ul style="list-style-type: none"> <li>• Read Module 26209-14 of the Electrical Trainee Guide</li> <li>• Answer the module review questions in Module 26209-14</li> <li>• Complete Module 26209-14 Performance Profile Sheet</li> <li>• Take the Module 26209-14 Exam</li> </ul>	1,2,3 A,B,C
May 29- June 7/ Weeks 3-4	Practical Applications for Lighting- Module 26303-14	<ul style="list-style-type: none"> <li>• Explain how the lighting terms lumen, candlepower, and foot-candle relate to one another.</li> <li>• Classify lighting fixtures by type and application.</li> <li>• Identify the general lighting pattern produced by each type of fixture.</li> </ul>	<ul style="list-style-type: none"> <li>• Read Module 26303-14 of the Electrical Trainee Guide</li> <li>• Answer the module review questions in Module 26303-14</li> <li>• Complete Module 26303-14 Performance Profile Sheet</li> <li>• Take the Module 26303-14 Exam</li> </ul>	1,2,5 A,B,C

Date/Week	Chapter/Lesson	Content	Assignments & Tests Due Dates	Competency Area
June 11- June 21/Weeks 5-6	Transformers- Module 26307- 14	<ul style="list-style-type: none"> <li>• Describe transformer operation.</li> <li>• Explain the principle of mutual induction.</li> <li>• Describe the operating characteristics of various types of transformers.</li> </ul>	<ul style="list-style-type: none"> <li>• Read Module 26307-14 of the Electrical Trainee Guide</li> <li>• Answer the module review questions in Module 26307-14</li> <li>• Take the Module 26307-14Exam</li> </ul>	1,2,3,5 A,B,C
June 25- July 12/Weeks 6-7	Commercial Electrical Services- Module 26308- 14	<ul style="list-style-type: none"> <li>• Describe various types of electric services for commercial and industrial installations.</li> <li>• Read electrical diagrams describing service installations.</li> <li>• 4. Explain the role of the <i>National Electrical Code</i>® in service installations</li> </ul>	<ul style="list-style-type: none"> <li>• Read Module 26308-14 of the Electrical Trainee Guide</li> <li>• Answer the module review questions in Module 26308-14</li> <li>• Take the Module 26308-14Exam</li> </ul>	1,2,3,5 A,B,C
July 16- 19 Week 8	Motors: Theory and Application- Module 26202- 14	<ul style="list-style-type: none"> <li>• Describe the various types of motor enclosures</li> <li>• Explain how the direction of a three-phase motor is changed.</li> <li>• Describe the methods for determining various motor connections</li> </ul>	<ul style="list-style-type: none"> <li>• Read Module 26202-14 of the Electrical Trainee Guide</li> <li>• Answer the module review questions in Module 2602-14</li> <li>• Complete Module 26202-14 Performance Profile Sheet</li> <li>• Take the Module 26202-14Exam</li> </ul>	1,2,6 A,B,C

Date/Week	Chapter/Lesson	Content	Assignments & Tests Due Dates	Competency Area
July 23- 24/Week 9	Motor Calculations- Module 26309- 14	<ul style="list-style-type: none"> <li>• Size branch circuits and feeders for electric motors.</li> <li>• Size and select overcurrent protective devices for motors.</li> <li>• Size and select overload relays for electric motors</li> </ul>	<ul style="list-style-type: none"> <li>• Read Module 26309-14 of the Electrical Trainee Guide</li> <li>• Answer the module review questions in Module 26309-14</li> <li>• Take the Module 26309-14Exam</li> </ul>	1,2,6 A,B,C

**COMPETENCY AREAS: INDUSTRIAL SAFETY PROCEDURES**

1. National Electric Code
2. Principles of Grounding and Bonding
3. Commercial Services
4. Three-Phase Power Systems
5. Electric Motor Fundamentals

**GENERAL CORE EDUCATIONAL COMPETENCIES:**

- a) The ability to utilize standard written English.
- b) The ability to solve practical mathematical problems.
- c) The ability to read, analyze, and interpret information.