



**ELTR 1020 Electrical Systems Basics 1**  
**COURSE SYLLABUS**  
**Fall Semester 2018**

Instructor reserves the right to change syllabus and lesson plans as necessary.

**COURSE INFORMATION**

Credit Hours/Minutes: 3/3000

Class Location: Main 429

Class Meets: Monday and Wednesday 10:40AM-12-40PM

CRN: 20288

**INSTRUCTOR CONTACT INFORMATION**

Instructor Name: Randy Robinson

Office Location: Main 430

Office Hours: Monday through Thursday 2:00-4:00PM

Email Address: rrobinson@southeasterntech.edu

Phone: 912-538-3137

Fax Number: 912-538-3156

Tutoring Hours : By Appointment

**REQUIRED TEXT**

Safety and Basic Electricity with NCCER Connect by NCCER, Pearson Publishers ISBN 978-1-269-83000-3

**REQUIRED SUPPLIES & SOFTWARE**

Tools and Safety Glasses; 2GB or higher USB Jump Drive

**COURSE DESCRIPTION**

Introduces the theory and application of varying sine wave voltage and current.

**MAJOR COURSE COMPETENCIES**

Magnetism, AC wave generation, AC test equipment, inductance, capacitance, and basic transformers.

**PREREQUISITE(S)**

None

**COURSE OUTLINE**

1. Magnetism
2. AC Wave Generation
3. AC Test Equipment
4. Inductance
5. Capacitance

## 6. Basic Transformers

### GENERAL EDUCATION CORE COMPETENCIES

STC 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

Class attendance is a very important aspect of a student's success in this course. Responsibility for class attendance rests with the student. Regular and punctual attendance at all scheduled classes is expected. Students are expected to complete all work required by the instructor. Unannounced quizzes/assignments may be given. Students that miss an unannounced quiz or assignment will receive a grade of 0. Students are expected to complete all work shown on the attached assignment sheet. Students are also expected to complete all tests and comprehensive problems on the dates specified on the attached calendar. Students are responsible for policies and procedures included in the *STC Catalog*. Electrical Systems Technology program 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, 912-538-3126, [hthomas@southeasterntech.edu](mailto:hthomas@southeasterntech.edu), 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, 912-538-3126, [hthomas@southeasterntech.edu](mailto:hthomas@southeasterntech.edu).

## 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" 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 also 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 STC Academic Dishonesty Policy states 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 STC Catalog and Student 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" 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 second 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>ADA/Section 504 - Equity- Title IX (Students) - OCR Compliance Officer</b>	<b>Title VI - Title IX (Employees) - EEOC Officer</b>
Helen Thomas, Special Needs Specialist Vidalia Campus 3001 East 1 <sup>st</sup> Street, Vidalia Office 108 Phone: 912-538-3126 <a href="mailto:hthomas@southeasterntech.edu">hthomas@southeasterntech.edu</a>	Blythe Wilcox, Director of Human Resources Vidalia Campus 3001 East 1 <sup>st</sup> Street, Vidalia Office 138B Phone: 912-538-3147 <a href="mailto:bwilcox@southeasterntech.edu">bwilcox@southeasterntech.edu</a>

### GRIEVANCE PROCEDURES

Grievance procedures can be found in the Catalog and Handbook located on STC’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 [STC website](#).

### 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>
Review Questions/Quizzes	10%
Module Tests	50 %
Performance Evaluations	10%
Lab Work	30%

### GRADING SCALE

<b>Letter Grade</b>	<b>Range</b>
A	90-100
B	80-89
C	70-79

<b>Letter Grade</b>	<b>Range</b>
D	60-69
F	0-59

## ELTR 1020 Electrical Basics 1

### Fall Semester 2018 Lesson Plan

Date/Week	Chapter/Lesson	Content	Assignments & Tests Due Dates	Competency Area
<p style="text-align: center;"><b>Begin</b> <b>October 21</b></p> <p style="text-align: center;"><b>End</b> <b>November 9</b></p>	Electrical Test Equipment- Module 26112-11	<ul style="list-style-type: none"> <li>• Explain the operations of and describe the following pieces of test equipment:</li> <li>• • Voltmeter</li> <li>• • Ohmmeter</li> <li>• • Clamp-on ammeter</li> <li>• • Multimeter</li> <li>• • Megohmmeter</li> <li>• • Motor and phase rotation testers</li> <li>• Select the appropriate meter for a given work environment based on category ratings.</li> <li>• Identify the safety hazards associated with the various types of test equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Read Module 26112-11 of the Electrical Level 1 Trainee Guide</li> <li>• Answer the module review questions on the My Pearson Lab site</li> <li>• Complete the Trade Terms Quiz pg. 12.13</li> <li>• Complete Module 26112-11 Performance Profile Sheet with instructor</li> <li>• Take the Module 26112-11 Exam</li> </ul>	<p style="text-align: center;"><b>3</b> <b>A,B,C</b></p>

Date/Week	Chapter/Lesson	Content	Assignments & Tests Due Dates	Competency Area
<p><b>Begin November 11</b></p> <p><b>End November 30</b></p>	<p>Alternating Current- Module 26201-11</p>	<ul style="list-style-type: none"> <li>• Calculate the phase relationship between two AC waveforms.</li> <li>• Describe the voltage and current phase relationship in a resistive AC circuit.</li> <li>• Describe the voltage and current transients that occur in an inductive circuit.</li> <li>• Define inductive reactance and state how it is affected by frequency.</li> <li>• Describe the voltage and current transients that occur in a capacitive circuit.</li> <li>• Define capacitive reactance and state how it is affected by frequency.</li> <li>• Explain the relationship between voltage and current in the following types of AC circuits: <ul style="list-style-type: none"> <li>• • RL circuit</li> <li>• • RC circuit</li> <li>• • LC circuit</li> <li>• • RLC circuit</li> </ul> </li> <li>• Explain the following terms as they relate to AC circuits: <ul style="list-style-type: none"> <li>• • True power</li> <li>• • Apparent power</li> <li>• • Reactive power</li> <li>• • Power factor</li> </ul> </li> <li>• Explain basic transformer action.</li> </ul>	<ul style="list-style-type: none"> <li>• Read Module 26201-11 of the Electrical Level 2 Trainee Guide</li> <li>• Answer the module review questions on the My Pearson Lab site</li> <li>• Complete the Module 26201-11 Supplemental Exercises pg. 1.44</li> <li>• Take the Module 26201-11 Exam</li> </ul>	<p><b>1,2,3,4,5 A,B,C</b></p>

**Competency Areas:**

1. Magnetism
2. AC Wave Generation
3. AC Test Equipment
4. Inductance
5. Capacitance

**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.