



ELCR-1030 Solid State Devices
COURSE SYLLABUS
Fall Semester 2020 (202112)

COURSE INFORMATION

Credit Hours/Minutes: 5 Hours / 4500 Minutes
Campus / Class Location: Vidalia Campus / Building B, Room 827
Class Meets: Monday and Wednesday (MW), 5:15 PM to 7:55 PM
Course Reference Number (CRN): 20128

INSTRUCTOR CONTACT INFORMATION

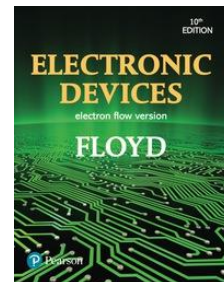
Instructor Name: William (Chip) Greene
Office Location: Vidalia Campus / Building B, Room 822
Office Hours: By Appointment Only
Email Address: wgreene@southeasterntech.edu
Phone: (912) 538-3102
Fax Number: (912) 538-3106
Preferred Method of Contact: Text or Email to Instructor

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

Electronic Devices, Electron Flow Version
10th edition
by Thomas L. Floyd,
published by Prentice Hall,
ISBN# 0-13-442010-1



REQUIRED SUPPLIES & SOFTWARE

Engineering / Scientific Calculator

Note: Although students can use their smart phones and tablets to access their online course(s), exams, discussions, assignments, and other graded activities should be performed on a personal computer. Neither Blackboard nor Georgia Virtual Technical Connection (GVTC) provide technical support for issues relating to the use of a smart phone or tablet so students are advised to not rely on these devices to take an online course. Students should not share login credentials with others and should change passwords periodically to maintain security.

COURSE DESCRIPTION

This course provides instruction in the theory and application of solid state devices in the electronics industry. Emphasis is placed on the physical characteristics and uses of solid state devices. Topics include PN diodes, power supplies, voltage regulation, bipolar junction theory and application, field effect transistors, and special applications.

PREREQUISITE(S)

ELCR 1020

MAJOR COURSE COMPETENCIES / COURSE OUTLINE

1. PN Diodes
2. Power Supplies
3. Voltage Regulation
4. Bipolar Junction Theory and Application
5. Field Effect Transistors
6. Special Applications

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 (TRADITIONAL)

Students are expected to complete all tests and comprehensive problems by the due dates. A ten point penalty will be assessed for each day a comprehensive problem is late. There are no makeup tests. Tests are made available for several days; therefore, there are no makeup tests. Students who miss a test will be assigned a grade of zero. Students are responsible for policies and procedures included in the STC E-Catalog. All online students must pledge that they have read and understand the STC Online Orientation within the first five days of class. Online students are responsible for checking e-mails and Blackboard announcements DAILY.

COVID-19 MASK REQUIREMENT

Masks or face coverings must be worn at all times while on the campus of Southeastern Technical College. This measure is being implemented to reduce COVID-19 related health risks for everyone engaged in the educational process. Masks or face coverings must be worn over the nose and mouth, in accordance with the Centers for Disease Control and Prevention (CDC). A student's refusal to wear a mask or face covering will be considered a classroom disruption and the student may be asked to leave campus and/or receive further discipline.

COVID-19 SIGNS AND SYMPTOMS

We encourage individuals to monitor for the signs and symptoms of COVID-19 prior to coming on campus.

If you have experienced the symptoms listed below or have a body temperature 100.4°F or higher, we encourage you to self-quarantine at home and contact a primary care physician's office, local urgent care facility, or health department for further direction. Please notify your instructor(s) by email and do not come on campus for any reason.

COVID-19 Key Symptoms
Fever or felt feverish
Cough: new or worsening, not attributed to another health condition
Shortness of breath, not attributed to another health condition
New loss of taste or smell
Chills; Repeated shaking with chills
Sore throat, not attributed to another health condition
Muscle pain, not attributed to another health condition or exercise
Headache, not attributed to another health condition
Diarrhea (unless due to known cause)
In the past 14 days, if you:
Have had close contact with or are caring for an individual diagnosed with COVID-19 at home (not in healthcare setting), please do not come on campus and contact your instructor (s).

COVID-19 SELF-REPORTING REQUIREMENT

Students who test positive for COVID-19 or who have been exposed to a COVID-19 positive person, are required to self-report using the [COVID 19 Health Reporting Form](#). Report all positive cases of COVID-19 to your instructor and [Stephannie Waters](#), Exposure Control Coordinator, swaters@southeasterntech.edu, 912-538-3195.

TRADITIONAL 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.

STUDENTS WITH DISABILITIES

Students with disabilities who believe that they may need accommodations in this class based on the impact of a disability are encouraged to contact the appropriate campus coordinator to request services.

Swainsboro Campus: [Macy Gay, \(mgay@southeasterntech.edu\)](mailto:mgay@southeasterntech.edu), 478-289-2274, Building 1, Room 1210

Vidalia Campus: [Helen Thomas, \(hthomas@southeasterntech.edu\)](mailto:hthomas@southeasterntech.edu), 912-538-3126, Building A, Room 165

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 make arrangements with the appropriate campus coordinator.

Swainsboro Campus: [Macy Gay, \(mgay@southeasterntech.edu\)](mailto:mgay@southeasterntech.edu), 478-289-2274, Building 1, Room 1210

Vidalia Campus: [Helen Thomas, \(hthomas@southeasterntech.edu\)](mailto:hthomas@southeasterntech.edu), 912-538-3126, Building A, Room 165

It is strongly encouraged that requests for consideration be made **PRIOR** to delivery and early enough in the pregnancy to ensure that all the required documentation is secured before the absence occurs. Requests made after delivery **MAY NOT** be accommodated. The coordinator will contact your instructor to discuss accommodations when all required documentation has been received. The instructor will then discuss a plan with you to make up missed assignments.

WITHDRAWAL PROCEDURE

Students wishing to officially withdraw from a course(s) or all courses after the drop/add period and prior to the 65% point of the term in which student is enrolled (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 for the course(s) when the student completes the withdrawal form.

Important – Student-initiated withdrawals are not allowed after the 65% point. After the 65% point of the term in which the student is enrolled, the student has earned the right to a letter grade and will receive a grade for the course. Please note: Abandoning a course(s) instead of following official withdrawal procedures may result in a grade of "F" (Failing 0-59) being assigned.

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

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. A grade of "W" will count in attempted hour calculations for the purpose of Financial Aid.

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

Students are required to take all tests and complete all assignments scheduled during the semester. Failure to take Tests/Exam(s) and complete assignments will result in a grade of zero. There will be no makeup of assignments or EXAMS. If Internet or browser failure occurs, contact instructor immediately. A decision will be made at that time if the exam will be reset. Instructor reserves the right to deduct points from the exam scores for exceeding the scheduled time limit on the exam and/or requiring student to come to campus to take the final exam. Note: If student notifies instructor about exam problems because of technical issues after the due date or on the last day of the semester, the student will NOT be allowed to make-up the exam. No exceptions! Assignments must be turned in on the assigned date and will not be accepted late, a grade of zero will be given. ALL Assignments are due according to the lesson plan.

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 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 (TCSG) and its constituent Technical Colleges do not discriminate on the basis of race, color, creed, national or ethnic origin, gender, 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 nondiscrimination policy encompasses the operation of all technical college-administered programs, federally financed programs, educational programs and activities involving admissions, scholarships and loans, student life, and athletics. It also applies to the recruitment and employment of personnel and contracting for goods and services.

All work and campus environments shall be free from unlawful forms of discrimination, harassment and retaliation as outlined under Title IX of the Educational Amendments of 1972, Title VI and Title VII of the Civil Rights Act of 1964, as amended, the Age Discrimination in Employment Act of 1967, as amended, Executive Order 11246, as amended, the Vietnam Era Veterans Readjustment Act of 1974, as amended, Section 504 of the Rehabilitation Act of 1973, as amended, the Americans With Disabilities Act of 1990, as amended, the Equal Pay Act, Lilly Ledbetter Fair Pay Act of 2009, the Georgia Fair Employment Act of 1978, as amended, the Immigration Reform and Control Act of 1986, the Genetic Information Nondiscrimination Act of 2008, the Workforce Investment Act of 1998 and other related mandates under TCSG Policy, federal or state statutes.

The Technical College System and Technical Colleges shall promote the realization of equal opportunity through a positive continuing program of specific practices designed to ensure the full realization of equal opportunity.

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

American With Disabilities Act (ADA)/Section 504 - Equity- Title IX (Students) – Office of Civil Rights (OCR) Compliance Officer	Title VI - Title IX (Employees) – Equal Employment Opportunity Commission (EEOC) Officer
Helen Thomas, Special Needs Specialist Vidalia Campus 3001 East 1 st Street, Vidalia Office 165 Phone: 912-538-3126 Email: Helen Thomas hthomas@southeasterntech.edu	Lanie Jonas, Director of Human Resources Vidalia Campus 3001 East 1 st Street, Vidalia Office 138B Phone: 912-538-3230 Email: Lanie Jonas ljonas@southeasterntech.edu

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 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 [Southeastern Technical College \(STC\) Website \(www.southeasterntech.edu\)](http://www.southeasterntech.edu).

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

Assessment/Assignment	Percentage
Exams *	55%
Homework	10%
Laboratories	25%
Study Guides	10%

GRADING SCALE

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

Disclaimer Statements

- (1) Instructor reserves the right to change the syllabus and/or lesson plan as necessary.
- (2) The official copy of the syllabus is located inside the student's online course shell or will be given to them during face to face class time the first day of the semester. The syllabus displayed in advance of the semester in a location other than the course you are enrolled in is for planning purposes only.

*** ELECTRONICS COMPETENCY EXAMS:**

ELCR-1030 grading is based on the individual chapter exams and labs for the course. However, the final exam for ELCR-1060 (Linear Integrated Circuits) is the ESA Level 3 Exam which covers both Solid State Devices (ELCR-1030) and Linear Integrated Circuits (ELCR-1060).

As we complete each chapter (or area) of the solid state devices material, you will see an icon that will tell you specifically which portions of the ESA-3 material you should now be reviewing for your final exam in ELCR-1060.

No minimum grade is required for this exam; however, this exam will carry a 35% grading weight. Poor performance on this exam could result in a final class grade of <70 out of 100 which will require the student to retake ELCR-1060.

Upon successful completion of all four parts of the ESA exams (i.e. $\geq 75\%$ on ESA I through IV exams), the student is awarded their Associate CET Certificate from the ISCET.

Students who wish to retake any ESA Exam in order to improve their grades to receive their Associate CET Certificate can do so at a cost of \$15 per exam within two years of the original purchase of their test voucher for that exam.

ELCR-1030 Solid State Devices

Fall Semester 2020 (202112) Lesson Plan

WEEK 1 (AUG IS AUGUST)

Date	Chapter / Lesson	Content	Assignments & Tests Due Dates	Competency Area
Aug 17	1.1, 1.2, 1.3	Class Introduction – Syllabi, Outline, Rules, and Regulations Coverage (Sect is Section) Sect 1.1 – Atomic Structure Sect 1.2 – Materials Used in Electronics Sect 1.3 – Current in Semiconductors	[On Blackboard] Read / Review START HERE info POST to appropriate Message Boards Read Sect 1.1, 1.2 & 1.3	1, b,c
Aug 18	1		Read Sect 1.4 & 1.5	1, b,c
Aug 19	1.4, 1.5	Sect 1.4 – N & P-Type Semiconductors Sect 1.5 – The PN Junction	LabVolt – Introduction to Semiconductors	1, b,c
Aug 20	1	BLACKBOARD	Complete Chapter 1 Study Guides Complete Chapter 1 Homework Study for Chapter 1 Exam	1, a,b,c

WEEK 2

Date	Chapter / Lesson	Content	Assignments & Tests Due Dates	Competency Area
Aug 24	1 2.1, 2.2, 2.3	BLACKBOARD Sect 2.1 – Diode Operation Sect 2.2 – Voltage-Current Characteristics of a Diode Sect 2.3 – Diode Approximations	Chapter 1 Exam Read Sect 2.1, 2.2 and 2.3	1,2, b,c
Aug 25	2		Read Sect 2.4, 2.5 and 2.6	2, b,c
Aug 26	2.4, 2.5, 2.6	Sect 2.4 – Half-Wave Rectifiers Sect 2.5 – Full-Wave Rectifiers Sect 2.6 – Power Supply Filters and Regulators		2, b,c
Aug 27	2		Read Sect 2.7, 2.8, 2.9 & 2.10	2, b,c

WEEK 3 (SEPT IS SEPTEMBER)

Date	Chapter / Lesson	Content	Assignments & Tests Due Dates	Competency Area
Aug 31	2.7, 2.8, 2.9, 2.10	Sect 2.7 – Diode Limiters and Clampers Sect 2.8 – Voltage Multipliers Sect 2.9 – The Diode Data Sheet Sect 2.10 – Troubleshooting		1, b,c
Sept 1	2	BLACKBOARD	Begin Chapter 2 Study Guides Begin Chapter 2 Homework	1,2, a,b,c
Sept 2		Chapter 2 Review	LabVolt – Diodes and Half-wave Rectification LabVolt – Full-Wave Rectification and Filter	1,2, a,b,c
Sept 3	2	BLACKBOARD	Continue Chapter 2 Study Guides and Chapter 2 Homework	1,2, a,b,c
Sept 7	No Class	HOLIDAY – LABOR DAY	HOLIDAY – LABOR DAY	No Class

WEEK 4

Date	Chapter / Lesson	Content	Assignments & Tests Due Dates	Competency Area
Sept 8	2	BLACKBOARD	Complete Chapter 2 Study Guides Complete Chapter 2 Homework Study for Chapter 2 Exam	1,2, b,c
Sept 9	2 3.1, 3.2, 3.3, 3.4	BLACKBOARD Sect 3.1 – The Zener Diode Sect 3.2 – Zener Diode Applications Sect 3.3 – Varactor Diodes Sect 3.4 – Optical Diodes	Chapter 2 Exam	
Sept 10	3		Read Sect 3.5 and 3.6 Begin Chapter 3 Study Guides Begin Chapter 3 Homework	1,3,6, a,b,c
Sept 14	3.5, 3.6, 3.7	Sect 3.5 – The Solar Cell Sect 3.6 – Other Types of Diodes Sect 3.7 – Troubleshooting Chapter 3 Review	LabVolt – Diode Wave Shaping & Zener Regulation	1,3,6, b,c

WEEK 5

Date	Chapter / Lesson	Content	Assignments & Tests Due Dates	Competency Area
Sept 15	3	BLACKBOARD	Complete Chapter 3 Study Guides Complete Chapter 3 Homework Study for Chapter 3 Exam	1,3,6, a,b,c
Sept 16	3 11.1, 11.2, 11.3, 11.4	BLACKBOARD Sect 11.1 – The Four-Layer Diode Sect 11.2 – The Silicon-Controlled Rectifier (SCR) Sect 11.3 – SCR Applications Sect 11.4 – The Diac and Triac	Chapter 3 Exam Read Sect 11.1, 11.2, 11.3 and 11.4	1,3,6, b,c
Sept 17	11	BLACKBOARD	Read Sect 11.5, 11.6 and 11.7 Begin Chapter 11 Study Guides Begin Chapter 11 Homework	1,3,6, a,b,c
Sept 21	11.5, 11.6, 11.7	Sect 11.5 – The Silicon-Controlled Switch (SCS) Sect 11.6 – The Unijunction Transistor (UJT) Sect 11.7 – The Programmable Unijunction Transistor (PUT)	LabVolt – Silicon Controlled Rectifier	1,3,6, b,c

WEEK 6

Date	Chapter / Lesson	Content	Assignments & Tests Due Dates	Competency Area
Sept 22	11	BLACKBOARD	Complete Chapter 11 Study Guides Complete Chapter 11 Homework	1,3,6, a,b,c
Sept 23	11	Chapter 11 Review	LabVolt – UJT Triggered SCR Power Control	1,3,6, b,c
Sept 24			Study for Chapter 11 Exam	
Sept 28	11	BLACKBOARD	Chapter 11 Exam Read Sect 4.1, 4.2 and 4.3	1,3,6, b,c

WEEK 7 (OCT IS OCTOBER)

Date	Chapter / Lesson	Content	Assignments & Tests Due Dates	Competency Area
Sept 29	4.1 to 4.6		Read Sect 4.4, 4.5 and 4.6	4, b,c
Sept 30	4	Sect 4.1 – Bipolar Junction Transistor (BJT) Structure Sect 4.2 – Basic BJT Operation Sect 4.3 – BJT Characteristics and Parameters		4, b,c
Oct 1		STAFF DEVELOPMENT DAY No Classes	STAFF DEVELOPMENT DAY No Classes	
Oct 5	4.4, 4.5, 4.6	Sect 4.4 – The BJT as an Amplifier Sect 4.5 – The BJT as a Switch Sect 4.6 – The Phototransistor		4, b,c
Oct 6	4	BLACKBOARD	Read Sect 4.7 and 4.8 Begin Chapter 4 Study Guides Begin Chapter 4 Homework	4, a,b,c

WEEK 8

Date	Chapter / Lesson	Content	Assignments & Tests Due Dates	Competency Area
Oct 7	4.7, 4.8	Sect 4.7 – BJT Categories & Packaging Sect 4.8 – Troubleshooting	LabVolt – Transistor Junctions & PNP Bias	4, b,c
Oct 8	4		Complete Chapter 4 Study Guides Complete Chapter 4 Homework Study for Chapter 4 Exam	4, a,b,c
Oct 12	4	BLACKBOARD	Chapter 4 Exam	4, b,c
Oct 13	5	MID-TERM (for Full Term) (DC is Direct Current)	Read Sect 5.1 and 5.2	4, b,c

WEEK 9

Date	Chapter / Lesson	Content	Assignments & Tests Due Dates	Competency Area
Oct 14	5.1 – 5.4	Sect 5.1 – The DC Operating Point Sect 5.2 – Voltage-Divider Bias Sect 5.3 – Other Bias Methods Sect 5.4 – Troubleshooting	LabVolt – Introduction to Transistor Amps	4, b,c
Oct 15	5	BLACKBOARD	Begin Chapter 5 Study Guides Begin Chapter 5 Homework	4, a,b,c
Oct 19	5	Chapter 5 Review	LabVolt – Bias Stabilization	4, b,c
Oct 20	5	BLACKBOARD	Complete Chapter 5 Study Guides Complete Chapter 5 Homework Study for Chapter 5 Exam	4, a,b,c

WEEK 10

Date	Chapter / Lesson	Content	Assignments & Tests Due Dates	Competency Area
Oct 21	5	BLACKBOARD	Chapter 5 Exam	4, b,c
Oct 22	6	(AC is Alternating Current) (Amp is Amplifier)	Read Sect 6.1, 6.2, and 6.3	4, b,c
Oct 26	6.1, 6.2, 6.3	Sect 6.1 – Amplifier Operations Sect 6.2 – Transistor AC Models Sect 6.3 – The Common-Emitter Amp	LabVolt – Common Emitter Circuit 65% Point for Full Term Semester	4, b,c
Oct 27	6		Read Sect 6.4, 6.5, and 6.6	4, b,c

WEEK 11 (NOV IS NOVEMBER)

Date	Chapter / Lesson	Content	Assignments & Tests Due Dates	Competency Area
Oct 28	6.4, 6.5, 6.6	Sect 6.4 – The Common-Collector Amp Sect 6.5 – The Common-Base Amp Sect 6.6 – Multistage Amplifiers	LabVolt – Common Collector Circuit Read Sect 6.7 and 6.8	4, a,b,c
Oct 29	6	BLACKBOARD	Begin Chapter 6 Study Guides Begin Chapter 6 Homework	4, b,c
Nov 2	6.7, 6.8	Sect 6.7 – The Differential Amplifier Sect 6.8 – Troubleshooting Chapter 6 Review	Study for Chapter 6 Exam	4,6, b,c
Nov 3	6	BLACKBOARD	Complete Chapter 6 Study Guides Complete Chapter 6 Homework	4, a,b,c

WEEK 12

Date	Chapter / Lesson	Content	Assignments & Tests Due Dates	Competency Area
Nov 4	7.1, 7.2	BLACKBOARD Sect 7.1 – The Class A Power Amp Sect 7.2 – Class B and Class AB Amps	Chapter 6 Exam Read Sect 7.1 and 7.2	4,6, b,c
Nov 5	7	BLACKBOARD	Read Sect 7.3 and 7.4 Begin Chapter 7 Study Guides Begin Chapter 7 Homework	4,6, a,b,c
Nov 9	7.3, 7.4	Sect 7.3 – The Class C Amp Sect 7.4 – Troubleshooting Chapter 7 Review	Study for Chapter 7 Exam Complete Chapter 7 Study Guides Complete Chapter 7 Homework	4,6, a,b,c
Nov 10	8	BLACKBOARD (FET is Field-Effect Transistor) (JFET is Junction Field-Effect Transistor)	Chapter 7 Exam Read Sect 8.1, 8.2, 8.3 and 8.4	4,6, b,c

WEEK 13

Date	Chapter / Lesson	Content	Assignments & Tests Due Dates	Competency Area
Nov 11	8.1, 8.2, 8.3, 8.4	Sect 8.1 – The JFET Sect 8.2 – JFET Characteristics and Parameters Sect 8.3 – JFET Biasing Sect 8.4 – The Ohmic Region		5, b,c
Nov 12	8	BLACKBOARD (MOSFET is Metal Oxide Semiconductor Field-Effect Transistor)	Read Sect 8.5, 8.6 and 8.7 Begin Chapter 8 Study Guides Begin Chapter 8 Homework	5, a,b,c
Nov 16	8.5, 8.6, 8.7	Sect 8.5 – The MOSFET Sect 8.6 – MOSFET Characteristics and Parameters Sect 8.7 – MOSFET Biasing		5, b,c
Nov 17	8.8, 8.9	(IGBT is Insulated-Gate Bipolar Transistor)	Read Sect 8.8 and 8.9	5, a,b,c

WEEK 14

Date	Chapter / Lesson	Content	Assignments & Tests Due Dates	Competency Area
Nov 18	8.8, 8.9	Sect 8.8 – The IGBT Sect 8.9 – Troubleshooting Chapter 8 Review	LabVolt – Junction FETs Study for Chapter 8 Exam Complete Chapter 8 Study Guides Complete Chapter 8 Homework	5, a,b,c
Nov 19	8	BLACKBOARD	Chapter 8 Exam Read Sect 9.1, 9.2, 9.3 and 9.4	5, b,c
Nov 23	9.1, 9.2, 9.3, 9.4	Sect 9.1 – The Common-Source Amp Sect 9.2 – The Common-Drain Amp Sect 9.3 – The Common-Gate Amp Sect 9.4 – The Class D Amplifier		5,6, b,c
Nov 24	9		Read Sect 9.5, 9.6 and 9.7	5,6, a,b,c

WEEK 15 (DEC IS DECEMBER)

Date	Chapter / Lesson	Content	Assignments & Tests Due Dates	Competency Area
Nov 25		HOLIDAY - THANKSGIVING	HOLIDAY - THANKSGIVING	
Nov 26		HOLIDAY - THANKSGIVING	HOLIDAY - THANKSGIVING	
Nov 30	9.5, 9.6, 9.7	Sect 9.5 – MOSFET Analog Switching Sect 9.6 – MOSFET Digital Switching Sect 9.7 – Troubleshooting		5,6, b,c
Dec 1	9	BLACKBOARD	Begin Chapter 9 Study Guides Begin Chapter 9 Homework	5,6, a,b,c
Dec 2	9	Chapter 9 Review Semester Classes End	LabVolt – JFET Amplifier Complete Chapter 9 Study Guides Complete Chapter 9 Homework Study for Chapter 9 Exam	5,6, b,c
Dec 3	9	BLACKBOARD	Chapter 9 Exam	5,6, b,c

FINAL EXAM WEEK

Date	Chapter / Lesson	Content	Assignments & Tests Due Dates	Competency Area
Dec 7	1 – 9	<u>Take Final Exam [Proctored]</u> ISCET ESA-3 Exam		1-6, a,b,c
Dec 8	1 – 9	<u>Take Final Exam [Proctored]</u> ISCET ESA-3 Exam		1-6, a,b,c

Competency Areas:

1. PN Diodes
2. Power Supplies
3. Voltage Regulation
4. Bipolar Junction Theory and Application
5. Field Effect Transistors
6. Special Applications

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.