ELCR 1005 – Soldering Technology
COURSE SYLLABUS
SUMMER SEMESTER 2017

Southeastern TECHNICAL COLLEGE

Semester:	**Summer 2017**
Course Title:	**Soldering Technology**
Course Number:	**ELCR 1005**
Credit Hr / Min:	**1 hr / 1500 min**
Class Location:	**GVTC / Blackboard**
Class Meets:	**via Internet / 9 wks**
CRN:	**60050**

Instructor:	**William Greene**
Office Hours:	**Mon – Thurs** 11:30 am – Noon
	4:30 pm – 6:00 pm
Office Location:	**RMTC Room 822, Vidalia Campus**
E-mail Address:	wgreene@southeasterntech.edu
Phone:	**912-538-3102 FAX: 912-538-3106**
	Preferred contact method is e-mail

REQUIRED TEXT: None

REQUIRED SUPPLIES: Soldering Kit
Please contact the STC Campus Shop
(912) 538-3129

On-Line Students, only: Soldering Iron
(with the smallest tip you can acquire)
Solder, Flux, and Safety Glasses

REQUIRED SOFTWARES: IE 7 or higher or Mozilla Firefox 2.0 or higher

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 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.

COURSE DESCRIPTION: Develops the ability to solder and desolder connectors, components, and printed circuit boards using industry standards. Topics include: safety practices, soldering, desoldering, anti-static grounding, and surface mount techniques.

MAJOR COURSE COMPETENCIES / COURSE OUTLINE:
1. Safety Practices
2. Soldering
3. Desoldering
4. Anti-Static Grounding
5. Surface Mount Techniques

PREREQUISITES: Provisional Admission

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: Students are expected to complete all work and comprehensive projects required by the instructor by the due dates and to attend the required proctored campus exam. Students will have at least one week to complete tests and projects. **Students who miss a test will be assigned a grade of zero**. **A ten point penalty will be assessed for each day a comprehensive project is late.** Discussion Board assignments are due on the Monday following the Thursday they are assigned. Exceptions to the due dates of assignments due to jury duty, military duty, court duty, or required job training will be made at the discretion of the instructor.

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.**

ONLINE ATTENDANCE: It is the student's responsibility to be academically engaged each week doing course related 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 will not be withdrawn by an instructor for attendance; however, all instructors will keep records of graded assignments and student participation in course activities. Students will be expected to complete all work required by the instructor as described in the individual course syllabus.

Students will have at least one week to complete tests and assignments. All tests and assignments are due at (time) on (Monday, Tuesday, or Wednesday) of each week. (Instructors…fill in the time and choose a day that assignments are due each week). Exceptions to the due dates of assignments due to jury duty, military duty, court duty, or required job training will be made at the discretion of the instructor.

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, to coordinate reasonable accommodations. (hthomas@southeasterntech.edu)

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.

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 accessed 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.

PROCTORED EVENT REQUIREMENT: In order to validate student identity for all online courses, students enrolled in online courses are **required** to complete one proctored event per online course. The proctored event will be administered on two separate days during the semester—once on the Vidalia campus and once on the Swainsboro campus and will be monitored by the instructor or another STC employee. The proctored event may be a major exam, assignment, or presentation, etc. that will count a minimum of 20% of the course grade. Students must attend one of the scheduled proctored sessions and will need to make arrangements with work, childcare, etc. The specific dates of the proctored event are scheduled on the Lesson Plan/Calendar for the online course. Students living further than 75 miles from either campus who cannot come to Southeastern Tech for the event must secure an approved proctoring site. The site and the proctor must meet Southeastern Technical College's requirements (instructor will provide more information and necessary forms if this is the case). Note: Students taking proctored events off campus will utilize the Proctor Scheduling and Approval Form found in Blackboard within the Getting Started/Start Here and Proctoring Event area. The completed form should be submitted to the course instructor a minimum of two weeks prior to the proctored event. If approved, the instructor will notify the proctor.

Students arranging off-campus proctoring must take the event on one of the originally scheduled days. Students

who do not complete the proctored event as scheduled must submit a valid documented excuse within three business days after the scheduled event. If the excuse is approved, students must make arrangements with the instructor to makeup/reschedule the missed event. The penalty and makeup instructions will be at the instructor's discretion. Proctored events will be given after the 65% point of the semester. **Students who do not complete the proctored event will receive an F in the course.**

As published on STC's website, any expenses incurred to obtain a proctor will be the responsibility of the student; however, students are not charged a proctoring fee when taking the proctored exam on the campus of Southeastern Tech. Most of Georgia's technical colleges do not charge to proctor exams for students enrolled in other TCSG colleges. Students who are enrolled at Southeastern Technical College and live out of the state of Georgia or out of the country could incur a proctoring charge. However, in that instance, the instructor would assist the student in locating the least expensive proctor.

PROCTORED EVENT FOR THIS COURSE: **ELCR-1005 has one (1) proctored event over the 9 week summer semester period,** which is the Final Exam. E-mail your professor when you have chosen which day you would like to take this exam. If you need special arrangements outside of the assigned day / time slots for the proctored event, contact your instructor immediately. The assigned days/times are **July 17th and July 18th** between 1:00 PM and 4:00 PM. The test will be given at the Vidalia Campus in the Gillis Building, Room 824 and/or 827.

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 your 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! Comprehensive project 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:
--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.
--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.
--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:

ADA/Section 504 - Equity- Title IX (Students) - OCR Compliance Officer	Title VI - Title IX (Employees) - EEOC Officer
Helen Thomas, Special Needs Specialist Vidalia Campus 3001 East 1st Street, Vidalia Office 108 Phone: 912-538-3126 hthomas@southeasterntech.edu	Blythe Wilcox, Director of Human Resources Vidalia Campus 3001 East 1st Street, Vidalia Office 138B Phone: 912-538-3147 bwilcox@southeasterntech.edu

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 at www.southeasterntech.edu.

ELCR 1005 GRADING POLICY: **GRADING SCALE**

Solder Projects	**55%**	A	(90-100)	For **any** course to count as credit for
Discussion Boards	**10%**	B	(80-89)	graduation, student must make a C or
Mid-Term Exam	**15%**	C	(70-79)	higher in the course.
Final Exam	**20%**	D	(60-69)	
	100%	F	(0-59)	**Final Exam** is the proctored event.

ELCR 1005 DISCUSSION BOARD GRADING RUBRIC:

Criteria	Achievement Level		
	Level 1 (0%)	**Level 2** (70%)	**Level 3** (100%)
Student Post to Discussion Board (50% Weighting)	0 points Student did not post to the Discussion Board -OR- Student post has at least 3 of the following: * Grammatical, spelling, or punctuation errors. * Less than four sentences. * Does not address all questions posed.	35 points Student post has at least 2 of the following: * Grammatical, spelling, or punctuation errors. * Less than four sentences. * Does not address all questions posed.	50 points Student post contains 4 or more sentences and addresses all questions. Student post has no more than 1 grammatical, spelling, or punctuation error.
Student Reply to Another Student (50% Weighting)	0 points Student did not reply to another student post. -OR- Student reply has at least 2 of the following: * Grammatical, spelling, or punctuation errors. * Less than three sentences.	35 points Student reply has at least 1 of the following: * Grammatical, spelling, or punctuation errors. * Less than three sentences. * Does not address all questions posed.	50 points Student reply contains 3 or more sentences. Student post has no grammatical, spelling, or punctuation errors.

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 employed 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.

ELCR-1005 – Soldering Technology
LESSON PLAN
Summer Semester 2017 (CRN 60050)

Color Codes: **Black = Assignments & Information, Blue = Graded Assignments (and/or attendance contacts)**

Date	Chapter / Lesson	Content	Assignments & Tests (Due Dates)	*Comp. Area
WEEK 1				
May 17	**1**	Online Course Orientation ELC104 – Soldering Technology Orientation (The Soldering Kit from the Bookstore contains the three soldering projects you will need to complete for this course. It does **not** include a solder iron, solder, flux, etc.)	**LOG ON** TO BLACKBOARD **Navigate** to the ELCR 1005 Course **Read** the COURSE ANNOUNCEMENTS **Follow** all instructions **POST** to appropriate Message Boards **Purchase Soldering Kit from Bookstore**	1,a,c
18	**1**	**Reading Assignment – Introduction Reading Assignment – Foreword** (**Reading Assignments** are located in the **Assignments** folder under the **Course Work Tab**)	**Read** the **Introduction** and the **Foreword**. (Print or save this info for future reference) **POST to Discussion Board #1**	1,2,4,a,c
22	**1**	**Procedures – Basic Procedures** (**Procedures** are located in the **Assignments** folder under the **Course Work Tab**)	**Read** all the content under the **Basic Procedures** folder. (Print or save this info for future reference)	1,2,4,a,c
23	**1**	**Procedures – Base Board Procedures**	**Read** all the content under the **Base Board Procedures** folder. **Watch Video:** Basic Soldering Part 1 (Take Notes when watching the videos) **Watch Video:** Basic Soldering Part 2	1,2,4,a,c
WEEK 2				
May 24	**1**	**This weekly e-mail should contain the following information:** - You have **purchased** the **Soldering Kit** - You have/have not **received** the **Kit** - **Where** you will do your **project work**, STC or other **Procedures – Conductor Procedures**	**E-mail your weekly project status** **REPLY to Discussion Board #1** **POST to Discussion Board #2** **Read** all the content under the **Conductor Procedures** folder.	1,2,4,a,c
25	**1**	**Procedures – Plated Hole Procedures**	**Read** all the content under the **Plated Hole Procedures** folder.	1,2,4,a,c
29		**HOLIDAY** – Memorial Day	**HOLIDAY** – Memorial Day	
30	**1**	**Procedures – Jumper Wires and Component Modification Procedures**	**Read** all the content under the **Jumper Wires and Component Modification Procedures.** **Watch Video:** Basic Soldering Part 3	1,2,4,a,c
31	**1**	**Soldering Skills – Soldering Basics 7.1.1** (**Soldering Skills** are in the **Assignments** folder under the **Course Work Tab**)	**Read 7.1.1** under the **Soldering Skills** folder.	1,2,3,a,c

WEEK 3				
June 1	**1**	This weekly e-mail should contain any updates or change to the last weekly e-mail. **Soldering Skills** **Preparation For Soldering and Component Removal 7.1.2**	**E-mail your weekly project status** **Read 7.1.2** under the **Soldering Skills** folder. **REPLY to Discussion Board #2** **POST to Discussion Board #3**	1-3,a,c
5	**1,2**	**Soldering Skills** **Solder Joint Acceptance Criteria 7.1.3** **Soldering Skills** **Soldering Through-Hole Components, Point-To-Point Method 7.2.1**	**Read 7.1.3** under the **Soldering Skills** folder. **Read 7.2.1** under the **Soldering Skills** folder.	2,a,c
6	**1,2**	**Soldering Skills** **Soldering Through-Hole Components, Solder Fountain Method 7.2.2** **Soldering Skills** **Soldering Surface-Mount Components, Point-To-Point Method 7.3.1** **START Solder Project #1** **Deluxe Learn to Solder Kit**	**Read 7.2.2** under the **Soldering Skills** folder. **Read 7.3.1** under the **Soldering Skills** folder. **START Solder Project #1** **Deluxe Learn to Solder Kit**	2,a,c
7	**1,3**	**Soldering Skills** **Soldering Surface-Mount Components, Hot Gas Method 7.3.2**	**Read 7.3.2** under the **Soldering Skills** folder.	2,a,c
WEEK 4				
June 8	**1,3**	This weekly e-mail should verify you have started your first project. **Soldering Skills** **Soldering Surface-Mount J-Lead Components, Point-To-Point Method 7.4.1** **Soldering Skills** **Soldering Surface-Mount J-Lead Components, Continuous Flow Method 7.4.2**	**E-mail your weekly project status** **Read 7.4.1** under the **Soldering Skills** folder. **Read 7.4.2** under the **Soldering Skills** folder. **REPLY to Discussion Board #3** **POST to Discussion Board #4**	2,a,c
12	**1,3**	**Soldering Skills** **Soldering Surface-Mount J-Lead Components, Hot Gas Method 7.4.3** **Soldering Skills** **Soldering Surface-Mount Gull Wing Components, Point-To-Point Method 7.5.1**	**Read 7.4.3** under the **Soldering Skills** folder. **Read 7.5.1** under the **Soldering Skills** folder. **TURN IN Solder Project #1**	5,a,c
13	**1,3**	**START Solder Project #2** **Deluxe SMD Learn to Solder Kit**	**START Solder Project #2** **Deluxe SMD Learn to Solder Kit**	1,2,5,a,c
14	**1,2,3**	**Soldering Skills** **Soldering Surface-Mount Gull Wing Components, Continuous Flow Method 7.5.2** **Soldering Skills** **Soldering Surface-Mount Gull Wing Components, Hot Gas Method 7.5.3**	**Read 7.5.2** under the **Soldering Skills** folder. **Read 7.5.3** under the **Soldering Skills** folder.	1,2,4,5, a,c

WEEK 5				
June 15	**1,2,3**	Review for Mid-Term Exam	Review for Mid-Term Exam **REPLY to Discussion Board #4** **POST to Discussion Board #5**	1,2,4,5, a,c
19	**1,2,3**	This weekly e-mail should verify you have **started your second project.** **Mid-Term Exam**	**E-mail your weekly project status** **Do Mid-Term Exam on BLACKBOARD**	1,2,4,5, a,c
20	**1,2,3,4**	**MIDTERM** **Rework Skills** **Component Removal of Through-Hole Components, Vacuum Method 8.1.1** (**Rework Skills** are in the **Assignments** folder under the **Course Work Tab**)	**MIDTERM** **Read 8.1.1** under the **Rework Skills** folder.	1,3,a,c
21	**1,2,3,4**	**Rework Skills** **Component Removal of Through-Hole Components, Solder Fountain Method 8.1.2** **START Solder Project #3** **AM/FM Radio Kit**	**Read 8.1.2** under the **Rework Skills** folder. **TURN IN Solder Project #2** **START Solder Project #3** **AM/FM Radio Kit**	1,2,3,4, a,c
WEEK 6				
June 22	**1,2,3,4**	This weekly e-mail should verify you have **started your third project.** **Rework Skills** **Component Removal of Surface-Mount Components, Forked Tip Method 8.2.1**	**E-mail your weekly project status** **Read 8.2.1** under the **Rework Skills** folder. **REPLY to Discussion Board #5** **POST to Discussion Board #6**	3,a,c
26	**1,2,3,4**	**Rework Skills** **Component Removal of Surface-Mount Components, Hot Tweezer Method 8.2.2**	**Read 8.2.2** under the **Rework Skills** folder.	3,a,c
27	**1,2,3,4**	**Rework Skills** **Component Removal of Surface-Mount J-Lead Components, Conduction Method 8.3.1**	**Read 8.3.1** under the **Rework Skills** folder.	3,a,c
28	**1,2,3,4**	**Rework Skills** **Component Removal of Surface-Mount J-Lead Components, Hot Gas/Air Method 8.3.2**	**Read 8.3.2** under the **Rework Skills** folder. **SUMMER ACTIVITY DAY**	3,a,c
WEEK 7				
June 29 **65% Point**	**1,2,3,4**	This weekly e-mail should update your **status of your third project.** **Rework Skills** **Component Removal of Surface-Mount Gull Wing Components, Conduction Method 8.4.1**	**E-mail your weekly project status** (which step you are on, issues, etc.) **Read 8.4.1** under the **Rework Skills** folder. **REPLY to Discussion Board #6** **POST to Discussion Board #7**	3,a,c
		JULY 4th HOLIDAY (July 3 – July 6)	**JULY 4th HOLIDAY (July 3 – July 6)**	
July 10	**1,2,3,4**	**Rework Skills** **Component Removal of Surface-Mount Gull Wing Components, Hot Gas/Air Method 8.4.2**	**Read 8.4.2** under the **Rework Skills** folder.	3,a,c
11	**1,2,3,4**	**Review for Final Exam**		1-5,a,c
12	**1,2,3,4**	**Review for Final Exam**		1-5,a,c

WEEK 8				
July 13	1,2,3,4	**This weekly e-mail should update your status of your third project.**	**E-mail your weekly project status** (which step you are on, issues, etc.) **REPLY to Discussion Board #7 POST to Discussion Board #8**	1-5,a,c
17	**1,2,3,4**	**FINAL EXAM [Proctored]**	**Take Final Exam on BLACKBOARD**	1-5,a,c
18	**1,2,3,4**	**FINAL EXAM [Proctored]**	**Take Final Exam on BLACKBOARD**	1-5,a,c
19	**1,2**	**CONTINUE Solder Project #3**		1,2,4,a,c
WEEK 9				
July 20	**1,2**	**CONTINUE Solder Project #3**	**REPLY to Discussion Board #8 POST to Discussion Board #9**	1,2,4,a,c
24	**1,2**	**CONTINUE Solder Project #3**		1,2,4,a,c
25	**1,2**	**CONTINUE Solder Project #3**		1,2,4,a,c
26	**1,2**	**TURN IN Solder Project #3** **SEMESTER ENDS**	**TURN IN Solder Project #3 REPLY to Discussion Board #9**	1,2,4,a,c
FINALS WEEK				
July 31		**Course Completed – No Activity on Final Days**		
Aug 1		**Course Completed – No Activity on Final Days**		

Chapter / Lesson Key:

1 – Basic Procedures
2 – Through-Hole Soldering Techniques
3 – Surface Mount Soldering Techniques
4 – De-soldering Techniques

* Competency Areas:

Electronics Technology Competency Areas:

1. Safety Practices
2. Soldering
3. Desoldering
4. Anti-Static Grounding
5. Surface Mount Techniques

General Core Competency Areas:

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.

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.**