



**ELCR-2140 Mechanical Devices**  
**COURSE SYLLABUS**  
**Online**  
**Fall Semester 2017**

**COURSE INFORMATION**

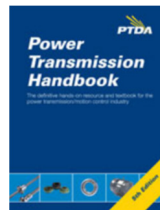
Credit Hours/Minutes: 2 Hours / 2250 Minutes  
Class Location: GVTC/Blackboard  
Class Meets: Via Internet for 15 weeks  
CRN: 20031  
Preferred Method of Contact: Email to Instructor

**INSTRUCTOR CONTACT INFORMATION**

Instructor Name: William (Chip) Greene  
Office Location: RMTTC Room 822, Vidalia Campus  
Office Hours: Monday through Thursday, 10:30 AM to Noon, 1:00 PM to 3:00 PM  
Email Address: [wgreene@southeasterntech.edu](mailto:wgreene@southeasterntech.edu)  
Phone: (912) 538-3102  
Fax Number: (912) 538-3106

**REQUIRED TEXT**

*Power Transmission Handbook & Workbook, 5<sup>th</sup> ed.*  
by PTDA, published by PTDA,  
ISBN# 978-0-9817331-9-7 (2 volume set)



**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 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 knowledge and skills necessary to transmit mechanical power using common industrial linkage types. Emphasis is placed on use of mechanical devices in combination with electronic controls. Topics include: linkages, motion analysis, gear drives, and preventative maintenance.

## PREREQUISITE(S)

Program Admission

## MAJOR COURSE COMPETENCIES / COURSE OUTLINE

1. Linkages
2. Gear Drives
3. Motion Analysis
4. Preventative Maintenance

## 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 (ONLINE)

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, [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.

## **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 for this course will be administered on two separate days during the semester on the Vidalia 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.

**The required proctored event for this class is scheduled on the following dates and times: Vidalia Campus, October 23<sup>rd</sup>, 1:30 PM, Main Building Room 429, and October 24<sup>th</sup>, 1:30 PM, Main Building Room 429.**

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

Statement will vary per program, course, or instructor. Information should be included pertaining to such items as tests, quizzes, homework, etc.....

### **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 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 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

Assessment/Assignment	Percentage
Chapter Review Questions	35%
Video Review Questions	10%
Discussion Boards	10%
Laboratory Skills (Proctored)	20%
Midterm and Final Exams	25%

### 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.

# ELCR-2140 Mechanical Devices

## Fall Semester 2018 Lesson Plan

### WEEK 1

Date	Chapter/ Lesson	Content	Assignments & Tests Due Dates	Comp. Area
Aug 14		<b>Chapter 1 – Fundamentals BLACKBOARD</b>	<b>[On BLACKBOARD]</b> Read / Review <b>START HERE</b> information POST to appropriate <b>Message Boards</b> Download/Review all material Start planning for <b>Proctored Lab Events</b>	a,c
15	1	<b>HANDBOOK pg 1-9 to 1-15 BLACKBOARD</b>	<b>Read Chapter 1 Review Chapter 1 Power Points</b>	1-4, a,b,c
16	1	<b>WORKBOOK pg 1-3 to 1-5</b>	<b>Review Chapter 1 Workbook Questions</b>	1-4, a,b,c
17	1	<b>VIDEO Fundamental Principles</b>	<b>Watch Video 820.01 (Take Notes)</b>	1-4, b,c

### WEEK 2

Date	Chapter/ Lesson	Content	Assignments & Tests Due Dates	Comp. Area
Aug 21	1	<b>BLACKBOARD</b>	<b>Do Video 820.01 Questions</b>	1-4, a,c
22	1	<b>BLACKBOARD</b>	<b>Do Chapter 1 Workbook Questions</b>	1-4, a,b,c
23	2	<b>Chapter 2 – Bearings HANDBOOK pg 2-17 to 2-41 BLACKBOARD</b>	<b>Read Chapter 2  POST on Discussion Board #1</b>	1,4, a,c
24	2	<b>BLACKBOARD</b>	<b>Review Chapter 2 Power Points</b>	1,4, a,b,c

### WEEK 3

Date	Chapter/ Lesson	Content	Assignments & Tests Due Dates	Comp. Area
Aug 28	2	<b>WORKBOOK pg 2-7 to 2-10</b>	<b>Review Chapter 2 Workbook Questions REPLY on Discussion Board #1</b>	1,4, a,b,c
29	2	<b>VIDEO Bearings: Types &amp; Maintenance</b>	<b>Watch Video 820.02 (Take Notes)</b>	1,4, a,c
30	2	<b>BLACKBOARD</b>	<b>Do Video 820.02 Questions POST on Discussion Board #2</b>	1,4, a,c
31	2	<b>BLACKBOARD</b>	<b>Do Chapter 2 Workbook Questions</b>	1,4, a,b,c
Sept 4		<b>HOLIDAY – LABOR DAY</b>	<b>HOLIDAY – LABOR DAY</b>	

**WEEK 4**

Date	Chapter/ Lesson	Content	Assignments & Tests Due Dates	Comp. Area
Sept 5	3	Chapter 3 – Belt Drives HANDBOOK pg 3-43 to 3-59 <b>BLACKBOARD</b>	Read Chapter 3 <b>REPLY on Discussion Board #2</b>	1,4, a,c
6	3	<b>BLACKBOARD</b>	Review Chapter 3 Power Points	1,4, a,b,c
7	3	WORKBOOK pg 3-11 to 3-13	Review Chapter 3 Workbook Questions	1,4, a,b,c
11	3	<b>BLACKBOARD</b>	<b>POST on Discussion Board #3</b>	1,4, a,c

**WEEK 5**

Date	Chapter/ Lesson	Content	Assignments & Tests Due Dates	Comp. Area
Sept 12	3	<b>BLACKBOARD</b>	<b>REPLY on Discussion Board #3</b>	1,4, a,c
13	3	<b>BLACKBOARD</b>	<b>Do Chapter 3 Workbook Questions</b>	1,4, a,b,c
14	3	<b>BLACKBOARD</b>	<b>POST on Discussion Board #4</b>	1,4, a,c
18	3	<b>BLACKBOARD</b>	<b>REPLY on Discussion Board #4</b>	1,4, a,c

**WEEK 6**

Date	Chapter/ Lesson	Content	Assignments & Tests Due Dates	Comp. Area
Sept 19	3	<b>BLACKBOARD</b>	<b>POST on Discussion Board #5</b>	1,4, a,c
20	4	Chapter 4 – Chain Drives HANDBOOK pg 4-61 to 4-84	Read Chapter 4	1,4, a,c
21	4	<b>BLACKBOARD</b>	Review Chapter 4 Power Points	1,4, a,b,c
25	4	WORKBOOK pg 4-15 to 4-18 <b>BLACKBOARD</b>	Review Chapter 4 Workbook Questions	1,4, a,b,c

**WEEK 7**

Date	Chapter/ Lesson	Content	Assignments & Tests Due Dates	Comp. Area
Sept 26	4	<b>BLACKBOARD</b>	<b>REPLY on Discussion Board #5</b>	1,4, a,c
27	4	<b>BLACKBOARD</b>	<b>Do Chapter 4 Workbook Questions</b>	1,4, a,b,c
28	1-4	<b>BLACKBOARD</b>	<b>Do MIDTERM Exam</b>	1,4, a,b,c
Oct 2	5	Chapter 5 – Clutches & Brakes HANDBOOK pg 5-85 to 5-96	Read Chapter 5	1,4, a,c

**WEEK 8**

Date	Chapter/ Lesson	Content	Assignments & Tests Due Dates	Comp. Area
Oct 3	5	<b>BLACKBOARD</b>	<b>Review Chapter 5 Power Points</b>	1,4, a,b,c
4	5	<b>WORKBOOK pg 5-19 to 5-21</b>	<b>Review Chapter 5 Workbook Questions</b>	1,4, a,b,c
5	5	<b>BLACKBOARD</b>	<b>POST on Discussion Board #6</b>	1,4, a,c
9	5	<b>BLACKBOARD MIDTERM</b>	<b>REPLY on Discussion Board #6</b>	1,4, a,c

**WEEK 9**

Date	Chapter/ Lesson	Content	Assignments & Tests Due Dates	Comp. Area
Oct 10	5	<b>BLACKBOARD</b>	<b>Do Chapter 5 Workbook Questions</b>	1,4 a,b,c
11	7	<b>Chapter 7 – Couplings &amp; U-Joints HANDBOOK pg 7-123 to 7-151</b>	<b>Read Chapter 7</b>	1,4, a,c
12	7	<b>BLACKBOARD</b>	<b>Review Chapter 7 Power Points</b>	1,4, a,b,c
16	7	<b>WORKBOOK pg 7-27 to 7-29</b>	<b>Review Chapter 7 Workbook Questions</b>	1,4, a,b,c

**WEEK 10**

Date	Chapter/ Lesson	Content	Assignments & Tests Due Dates	Comp. Area
Oct 17	7	<b>BLACKBOARD</b>	<b>POST on Discussion Board #7</b>	1,4, a,c
18	7	<b>BLACKBOARD</b>	<b>REPLY on Discussion Board #7</b>	1,4, a,c
19	7	<b>BLACKBOARD</b>	<b>Do Chapter 7 Workbook Questions</b>	1,4, a,b,c
23	Lab	<b>STC – MAIN BUILDING 429 PROCTORED EVENT</b>	<b>LAB 1: V-Belt Installation LAB 2: Motor &amp; Shaft Alignment</b>	4, b,c

**WEEK 11**

Date	Chapter/ Lesson	Content	Assignments & Tests Due Dates	Comp. Area
Oct 24	Lab	<b>STC – MAIN BUILDING 429 PROCTORED EVENT 65% Point for Full Term Fall</b>	<b>LAB 1: V-Belt Installation LAB 2: Motor &amp; Shaft Alignment</b>	4, b,c
25	8	<b>Chapter 8 – Gears HANDBOOK pg 8-153 to 8-171</b>	<b>Read Chapter 8 REPLY on Discussion Board #8</b>	2,4, a,c
26	8	<b>BLACKBOARD</b>	<b>Review Chapter 8 Power Points</b>	2,4, a,b,c
30	8	<b>BLACKBOARD</b>	<b>Review Chapter 8 Power Points</b>	2,4, a,b,c



**WEEK 12**

Date	Chapter/ Lesson	Content	Assignments & Tests Due Dates	Comp. Area
Oct 31	8	WORKBOOK pg 8-31 to 8-34	Review Chapter 8 Workbook Questions <b>POST on Discussion Board #9</b>	2,4, a,b,c
Nov 1	8	VIDEO Gear Drives	Watch Video 820.03 (Take Notes)	2,4, a,c
2	8	<b>BLACKBOARD</b>	<b>Do Video 820.03 Questions</b>	2,4, a,c
6	8	<b>BLACKBOARD</b>	<b>Do Chapter 8 Workbook Questions</b>	2,4, a,b,c

**WEEK 13**

Date	Chapter/ Lesson	Content	Assignments & Tests Due Dates	Comp. Area
Nov 7	10	Chapter 10 – Linear Motion HANDBOOK pg 10-193 to 10-223	Read Chapter 10 <b>REPLY on Discussion Board #9</b>	3, a,c
8	10	<b>BLACKBOARD</b>	Review Chapter 10 Power Points	3, a,b,c
9	10	WORKBOOK pg 10-39 to 10-42	Review Chapter 10 Workbook Questions	3, a,b,c
13	10	<b>BLACKBOARD</b>	<b>POST on Discussion Board #10</b>	3, a,c

**WEEK 14**

Date	Chapter/ Lesson	Content	Assignments & Tests Due Dates	Comp. Area
Nov 14	10	<b>BLACKBOARD</b>	<b>REPLY on Discussion Board #10</b>	3, a,c
15	10	<b>BLACKBOARD</b>	<b>Do Chapter 10 Workbook Questions</b>	3, a,b,c
16	16	Chapter 16 – Lubrication HANDBOOK pg 16-315 to 16-329	Read Chapter 16	4, a,c
20	16		Review Chapter 16	4, a,c

**WEEK 15**

Date	Chapter/ Lesson	Content	Assignments & Tests Due Dates	Comp. Area
Nov 21	16	WORKBOOK pg 16-63 to 16-65	Review Chapter 16 Workbook Questions	4, a,b,c
22		HOLIDAY - THANKSGIVING	HOLIDAY - THANKSGIVING	
23		HOLIDAY - THANKSGIVING	HOLIDAY - THANKSGIVING	
27	16	<b>BLACKBOARD</b>	<b>Do Chapter 16 Workbook Questions</b>	4, a,b,c
28	All	REVIEW	REVIEW for Final Exam	1-4, b,c

Date	Chapter/ Lesson	Content	Assignments & Tests Due Dates	Comp. Area
29	1 – 5, 7, 8, 10, 16	REVIEW	REVIEW for Final Exam	1-4, b,c
30	1 – 5, 7, 8, 10, 16	REVIEW	REVIEW for Final Exam	1-4, b,c

### FINAL EXAM WEEK

Date	Chapter/ Lesson	Content	Assignments & Tests Due Dates	Comp. Area
Dec 5	1 – 5, 7, 8, 10, 16	Day 1 of Final Exams	Mechanical Devices Final Exam	1-4, a,b,c
6	1 – 5, 7, 8, 10, 16	Day 2 of Final Exams	(Complete by Midnight of Day 2)	1-4, a,b,c

### Competency Areas:

1. Linkages
2. Gear Drives
3. Motion Analysis
4. Preventative Maintenance

### 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.

### DISCUSSION BOARD GRADING RUBRIC

Criteria	Level 1 (0%)	Level 2 (70%)	Level 3 (100%)
<b>Student Post to Discussion Board</b> (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.
<b>Student Reply to Another Student</b> (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.