![HCC logo]

Instructional Services · Automotive · Heavy Vehicle, Diesel, & Industrial Technology

Steering & Suspension I-17780

DEMR-1330

F8B 2021 **Section 0002** **3 Credits** **10/18/2021 to 12/12/2021** **Modified 11/05/2021**

🕐 Course Meetings

Course Modality

In Person (Face to Face)

Meeting Days

Monday & Wednesday

Meeting Times

7:00 AM to 11:50 AM

Meeting Location

Bldg B - Diesel Shop Lab

👤 Welcome and Instructor Information

Welcome to DEMR 1330! My name is Gary Nagelhout and I will be your Instructor for this course. It is a required course for all diesel technicians, and as an instructor I want my students to be successful.

I feel that it is my responsibility to provide you with knowledge concerning the field of Steering and Suspension technology, modeling good technical skills, and organizing and monitoring the field experience that allows you to connect the information that you learn in this course to the real world of technology.

Instructor: Mr. Gary Martin Nagelhout

Email: gary.nagelhout@hccs.edu
Office: 713-718-8114

What's Exciting About This Course

This course is exciting because it allows you to physically disassemble, inspect, reassemble and align the vehicle.

My Personal Welcome

Welcome to the course!

Preferred Method of Contact

I can be reached via email and by text message.

Office Hours

1-Hour following class

Monday, Tuesday, Wednesday, Thursday, 9:30 AM to 10:30 AM, Diesel Laboratory

🖥 Course Overview

Course Description

A study of design, function, maintenance, and repair of steering and suspension systems. Emphasis on troubleshooting and repair of failed components.

Requisites

There is no prerequisites for this course

Department Website

Heavy Vehicle, Diesel and Industrial Technology Program (https://www.hccs.edu/programs/areas-of-study/public-safety-transportation--consumer-services/heavy-vehicle--truck-repair/)

◎ Core Curriculum Objectives (CCOs)

Upon completion of this course the student will be able to:

1. Understand the basic theory and operation of steering and suspension systems
2. Diagnose steering and suspension system components for wear and usability
3. Repair steering and suspension components by rebuilding or replacing parts
4. Adjust steering and suspension system components on all types of steering and suspension systems

📊 Student Learning Outcomes and Objectives

Program Student Learning Outcomes (PSLOs)

Program Student Learning Outcomes (PSLOs) can be found at:

Program Student Learning Outcomes Link (https://www.hccs.edu/programs/areas-of-study/public-safety-transportation--consumer-services/heavy-vehicle--truck-repair/)

Course Student Learning Outcomes (CSLOs)

Upon completion of DEMR 1330 Students will be able to:

1. Identify components in the steering and suspension systems
2. Learn proper removal and installation procedures
3. Use mathematical skills to calculate steering and alignment angles
4. Employ geometrical principles to accurately set turning angles

☰ Departmental Practices and Procedures

Program-Specific Student Success Information : How to succeed in Hybrid Classes

Here's a word of caution for those of you who are taking your first online/hybrid course. This course will require you to spend at least the same amount of time as a class that meets three hours a week in a classroom, and some students find that an online course takes more time.

This is **not** a self-paced course. **You must meet the established deadlines** for completing the assignments and tests. The flexibility of an online/hybrid course allows you to choose the time of day or night to "enter" the virtual classroom and complete assignments. There may be scheduled times that you must log in for virtual meetings or lessons. **Plan to log in to the Canvas classroom and work on assignments every day.**

How to Succeed in This Course

- Log in to the course daily to read any messages or announcements.
- Keep up with the Course Calendar and the due dates.
- Read the assigned materials (presentations, articles, websites, or chapters).
- Complete the assignments and discussions according to the instructions and submit them on time.
- Contact the professor if you have any questions or problems.

What Technical Skills Are Required for Most Online Classes?

For most online classes, you will need to have the following computer and internet skills before you begin the class.

Skill Needed	Why?
Send a message, and attach a file to a message.	You will need these skills to be able to communicate effectively using Canvas.
Use your browser to go to a web site.	You will need to know how to use a web browser such as Google Chrome, Firefox, Safari, or Internet Explorer to browse the web.
Download, open, and view a file.	You will need this skill to download and read some materials in your course.
Upload a file to a web site.	You will need this skill to upload a file for an assignment.
Use an Internet search engine such as Google.	You may be asked to find information on the Internet as part of a research paper or discussion group.
Open and save a file in a program such as Microsoft Word or One Drive.	Much of your work will be done in programs on your HCC Office365 account, like Microsoft Word and Powerpoint, in which you create documents and save them. All HCC students have a free Office365 account associated with their email login.
Use folders to organize the files on your computer.	You will need to know how to create and name folders and how to save or copy files into those folders so you can keep your work organized.
Use a word processor to create a simple document, save the document, and print the document.	Most of your assignments must be submitted electronically through Canvas, so you will have to do your work in a word processor such as Microsoft Word.

📒 Instructional Materials and Resources

Instructional Materials

The [HCC Online Bookstore (https://hccs.bncollege.com/shop/hccs-central/page/find-textbooks)](https://hccs.bncollege.com/shop/hccs-central/page/find-textbooks) provides searchable information on

textbooks for all courses. Check with your instructor before purchasing textbooks because the book might be included in your course fees.

Add Instructional Materials Here

Temporary Free Access to E-Book

Here is the link to get temporary free access to a digital version of the text for fourteen days:

<< [add link] >>

Other Instructional Resources

Courseware

Content here...

Heavy Duty Truck Systems

Author: Sean Bennett
Publisher: Cengage
Edition: 7th Edition
ISBN: 9780357012215
Availability: Campus Bookstore

Cengage Unlimited

Author: Multiple
Publisher: Cengae
Optional
Availability: Campus Bookstore

This is a product that provides online access to all of the text books that Cengage publish. You will have access to online homework assignments, study materials, and online electronic text books. You will also have the ability to rent a hard copy printed text book from the publisher for $8.00 while you are attending the class.

Heavy Truck Systems 7th Edition or Newer

Author: Sean Bennett
Publisher: Cengage Learning
Edition: 7th Edition
ISBN: 9780357012215
Availability: Campus Bookstore

✔ Course Requirements

Assignments, Exams, and Activities

Type	Weight	Topic	Notes
Written Assignment	Included in the Exams Percentage		Describe the assignment here.
Exams/Quizzes	50%		Describe the assignment here.
In-Class Activities	50%		Describe the assignment here.
Final Exam	Part of the Exams %		Describe the assignment here.
Extra Credit			Describe the assignment here.

Grading Formula

Grade	Range	Notes
A	90 to 100	
B	80 to 89	
C	70 to 79	
D	60 to 69	
F	59 & Below	

✳ Instructor's Practices and Procedures

Incomplete Policy

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Missed Assignments/Make-Up Policy

All missed assignments are to be completed by the end of the following week.

All missed Lab days are to be reviewed on Canvas.

Academic Integrity

Here's the link to the HCC information about academic integrity (Scholastic Dishonesty and Violation of Academic Scholastic Dishonesty and Grievance):

https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-procedures/ (https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-procedures/)

Attendance Procedures

Attendance policy - Students are expected to attend classes regularly, and to be on time for every class period. Students can be dropped from a class due to excessive absences. Excessive tardiness may be considered absences. Students are responsible for subjects, assignments, and projects covered during their absences.

Student Conduct

Classroom & Laboratory Conduct

Proper behavior is expected in all classes and laboratories. Foul language and horseplay are not allowed. Making or receiving cell phone calls during class is not allowed. Sleeping in class is not allowed. Students not following these policies will be asked to leave the class.

Instructor's Course-Specific Information

Weekly Module assignments will be in the Canvas format. These weekly modules must be completed in order to move onto the next weeks module.

Introduction to Medium/Heavy Truck Steering and Suspension Systems

Chapter 25: Medium/Heavy Truck Steering and Alignment

Chapter 26: Medium/Heavy Truck Suspension Systems

Chapter 27: Medium/Heavy Truck Wheels and Tires

Chapter 32: Medium/Heavy Truck Vehicle Chassis & Frame

Devices

Cell Phones

All cell phones must be muted, set to vibrate, or turned off during class. Cell phone activity during class is deemed disruptive to the academic process and will not be tolerated. If you need to make or receive an emergency call, you must leave the classroom.

Cell Phones can be used during Lab assignments to take pictures for reference procedures.

Faculty Statement about Student Success

As a student wanting to learn the field of Diesel Technology, it is your responsibility to read the textbook, submit assignments on the due dates, study for the exams, participate in the classroom activities, attend class, and enjoy yourself while experiencing the real world of education.

Faculty-Specific Information Regarding Canvas

This course section will use Canvas (https://eagleonline.hccs.edu (https://eagleonline.hccs.edu)) to supplement in-class assignments, exams, and activities.

HCCS Open Lab locations may be used to access the Internet and Canvas. For best performance, Canvas should be used on the current or first previous major release of Chrome, Firefox, Edge, or Safari. Because it's built using web standards, Canvas runs on Windows, Mac, Linux, iOS, Android, or any other device with a modern web browser.

Canvas only requires an operating system that can run the latest compatible web browsers. Your computer operating system should be kept up to date with the latest recommended security updates and upgrades.

Social Justice Statement

Add Content Here

🏛 HCC Policies and Information

HCC Grading System

HCC uses the following standard grading system:

Grade	Grade Interpretation	Grade Points
A	Excellent (90-100)	4
B	Good (80-89)	3

Grade	Grade Interpretation	Grade Points
C	Fair (70-79)	2
D	Passing (60-69), except in developmental courses.	1
F	Failing (59 and below)	0
FX	Failing due to non-attendance	0
W	Withdrawn	0
I	Incomplete	0
AUD	Audit	0
IP	In Progress. Given only in certain developmental courses. A student must re-enroll to receive credit.	0
COM	Completed. Given in non-credit and continuing education courses.	0

Link to Policies in Student Handbook

Here's the link to the HCC Student Handbook https://www.hccs.edu/resources-for/current-students/student-handbook/ (https://www.hccs.edu/resources-for/current-students/student-handbook/) In it you will find information about the following:

- Academic Information
- Academic Support
- Attendance, Repeating Courses, and Withdrawal
- Career Planning and Job Search
- Childcare
- disAbility Support Services
- Electronic Devices
- Equal Educational Opportunity
- Financial Aid TV (FATV)
- General Student Complaints
- Grade of FX
- Incomplete Grades
- International Student Services
- Health Awareness
- Libraries/Bookstore
- Police Services & Campus Safety
- Student Life at HCC
- Student Rights and Responsibilities
- Student Services
- Testing
- Transfer Planning
- Veteran Services

Link to HCC Academic Integrity Statement

https://www.hccs.edu/resources-for/faculty/student-conduct-resources-for-faculty/ (https://www.hccs.edu/resources-for/faculty/student-conduct-resources-for-faculty/)

Campus Carry Link

Here's the link to the HCC information about Campus Carry:

https://www.hccs.edu/departments/police/campus-carry/ (https://www.hccs.edu/departments/police/campus-carry/)

HCC Email Policy

When communicating via email, HCC requires students to communicate only through the HCC email system to protect your privacy. If you have not activated your HCC student email account, you can go to HCC Eagle ID (https://www.hccs.edu/resources-for/current-students/student-e-maileagle-id/) and activate it now. You may also use Canvas Inbox to communicate.

Office of Institutional Equity

Use the link below to access the HCC Office of Institutional Equity, Inclusion, and Engagement (https://www.hccs.edu/departments/institutional-equity/ (https://www.hccs.edu/departments/institutional-equity/))

Ability Services

HCC strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including long and short term conditions, mental health, chronic or temporary medical conditions), please meet with a campus Abilities Counselor as soon as possible in order to establish reasonable accommodations. Reasonable accommodations are established through an interactive process between you, your instructor(s) and Ability Services. It is the policy and practice of HCC to create inclusive and accessible learning environments consistent with federal and state law. For more information, please go to https://www.hccs.edu/support-services/ability-services/ (https://www.hccs.edu/support-services/ability-services/)

Title IX

Houston Community College is committed to cultivating an environment free from inappropriate conduct of a sexual or gender-based nature including sex discrimination, sexual assault, sexual harassment, and sexual violence. Sex discrimination includes all forms of sexual and gender-based misconduct and violates an individual's fundamental rights and personal dignity. Title IX prohibits discrimination on the basis of sex-including pregnancy and parental status in educational programs and activities. If you require an accommodation due to pregnancy please contact an Abilities Services Counselor. The Director of EEO/Compliance is designated as the Title IX Coordinator and Section 504 Coordinator. All inquiries concerning HCC policies, compliance with applicable laws, statutes, and regulations (such as Title VI, Title IX, and Section 504), and complaints may be directed to:

David Cross
Director EEO/Compliance
Office of Institutional Equity & Diversity
3100 Main
(713) 718-8271
Houston, TX 77266-7517 or Institutional.Equity@hccs.edu (mailto:Institutional.Equity@hccs.edu)

http://www.hccs.edu/departments/institutional-equity/title-ix-know-your-rights/ (http://www.hccs.edu/departments/institutional-equity/title-ix-know-your-rights/)

Office of the Dean of Students

Contact the office of the Dean of Students to seek assistance in determining the correct complaint procedure to follow or to identify the appropriate academic dean or supervisor for informal resolution of complaints.

https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-complaints/speak-with-the-dean-of-students/ (https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-complaints/speak-with-the-dean-of-students/)

Student Success

Expect to spend at least twice as many hours per week outside of class as you do in class studying the course content. Additional time will be required for written assignments. The assignments provided will help you use your study hours wisely. Successful completion of this course requires a combination of the following:

- Reading the textbook
- Attending class in person and/or online
- Completing assignments
- Participating in class activities

There is no short cut for success in this course; it requires reading (and probably re-reading) and studying the material using the course objectives as a guide.

Canvas Learning Management System

Canvas is HCC's Learning Management System (LMS), and can be accessed at the following URL:

https://eagleonline.hccs.edu (https://eagleonline.hccs.edu)

HCCS Open Lab locations may be used to access the Internet and Canvas. For best performance, Canvas should be used on the current or first previous major release of Chrome, Firefox, Edge, or Safari. Because it's built using web standards, Canvas runs on Windows, Mac, Linux, iOS, Android, or any other device with a modern web browser.

Canvas only requires an operating system that can run the latest compatible web browsers. Your computer operating system should be kept up to date with the latest recommended security updates and upgrades.

HCC Online Information and Policies

Here is the link to information about HCC Online classes, which includes access to the required Online Information Class Preview for all fully online classes: https://www.hccs.edu/online/ (https://www.hccs.edu/online/)

Scoring Rubrics, Sample Assignments, etc.

Look in Canvas for the scoring rubrics for assignments, samples of class assignments, and other information to assist you in the course. https://eagleonline.hccs.edu/login/ldap (https://eagleonline.hccs.edu/login/ldap)

Instructor and Student Responsibilities

As your Instructor, it is my responsibility to:

- Provide the grading scale and detailed grading formula explaining how student grades are to be derived
- Facilitate an effective learning environment through learner-centered instructional techniques
- Provide a description of any special projects or assignments
- Inform students of policies such as attendance, withdrawal, tardiness, and making up assignments
- Provide the course outline and class calendar that will include a description of any special projects or assignments
- Arrange to meet with individual students during office hours, and before and after class as required

As a student, it is your responsibility to:

- Attend class in person and/or online
- Participate actively by reviewing course material, interacting with classmates, and responding promptly in your communication with me
- Read and comprehend the textbook
- Complete the required assignments and exams
- Ask for help when there is a question or problem
- Keep copies of all paperwork, including this syllabus, handouts, and all assignments
- Be aware of and comply with academic honesty policies in the HCCS Student Handbook (https://www.hccs.edu/resources-for/current-students/student-handbook/)

Sensitive or Mature Course Content

In this college-level course, we may occasionally discuss sensitive or mature content. All members of the classroom environment, from your instructor to your fellow students, are expected to handle potentially controversial subjects with respect and consideration for one another's varied experiences and values.

EGLS3

The EGLS[3] ([Evaluation for Greater Learning Student Survey System (https://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/)](https://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/)) will be available for most courses near the end of the term until finals start. This brief survey will give invaluable information to your faculty about their teaching. Results are anonymous and will be available to faculty and division chairs after the end of the term. EGLS[3] surveys are only available for the Fall and Spring semesters. EGLS3 surveys are not offered during the Summer semester due to logistical constraints.

[https://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/ (https://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/)](https://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/)

Housing and Food Assistance for Students

Any student who faces challenges securing their foods or housing and believes this may affect their performance in the course is urged to contact the Dean of Students at their college for support. Furthermore, please notify the professor if you are comfortable in doing so.

This will enable HCC to provide any resources that HCC may possess.

Student Resources

Tutoring

HCC provides free, confidential, and convenient academic support, including writing critiques, to HCC students in an online environment and on campus. Tutoring is provided by HCC personnel in order to ensure that it is contextual and appropriate. Visit the [HCC Tutoring Services (https://www.hccs.edu/resources-for/current-students/tutoring/)](https://www.hccs.edu/resources-for/current-students/tutoring/) website for services provided.

Libraries

The HCC Library System consists of 9 libraries and 6 Electronic Resource Centers (ERCs) that are inviting places to study and collaborate on projects. Librarians are available both at the libraries and online to show you how to locate and use the resources you need. The libraries maintain a large selection of electronic resources as well as collections of books, magazines, newspapers, and audiovisual materials. The portal to all libraries' resources and services is the HCCS library web page at [https://library.hccs.edu (https://library.hccs.edu/)](https://library.hccs.edu/).

Supplementary Instruction

Supplemental Instruction is an academic enrichment and support program that uses peer-assisted study sessions to improve student retention and success in historically difficult courses. Peer Support is provided by students who have already succeeded in completion of the specified course, and who earned a grade of A or B. Find details at [https://www.hccs.edu/resources-for/current-students/supplemental-instruction/ (https://www.hccs.edu/resources-for/current-students/supplemental-instruction/)](https://www.hccs.edu/resources-for/current-students/supplemental-instruction/).

Resources for Students:

[https://www.hccs.edu/resources-for/current-students/communicable-diseases/resources-for-students/ (https://www.hccs.edu/resources-for/current-students/communicable-diseases/resources-for-students/)](https://www.hccs.edu/resources-for/current-students/communicable-diseases/resources-for-students/)

Basic Needs Resources:

[https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/ (https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/)](https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/)

Student Basic Needs Application:

https://hccs.co1.qualtrics.com/jfe/form/SV_25WyNx7NwMRz1FH (https://hccs.co1.qualtrics.com/jfe/form/SV_25WyNx7NwMRz1FH)

COVID-19

Here's the link to the HCC information about COVID-19:

https://www.hccs.edu/resources-for/current-students/communicable-diseases/ (https://www.hccs.edu/resources-for/current-students/communicable-diseases/)

Instructional Modalities

In-Person (P)

Safe, face-to-face course with scheduled dates and times

Online on a Schedule (WS)

Fully online course with virtual meetings at scheduled dates and times

Online Anytime (WW)

Traditional online course without scheduled meetings

Hybrid (H)

Course that meets safely 50% face-to-face and 50% virtually

Hybrid Lab (HL)

Lab class that meets safely 50% face-to-face and 50% virtually

📅 Course Calendar

Syllabus Modifications

The instructor reserves the right to modify the syllabus at any time during the semester and will promptly notify students in writing, typically by e-mail, of any such changes.

📋 Additional Information

Department/Program Information

The Heavy Vehicle, Diesel & Industrial Technology Program offers a Occupational Skills Award (OSA) and it offers a Level 1 Certificate. For more information on these certificates you can visit:

https://www.hccs.edu/programs/areas-of-study/public-safety-transportation--consumer-services/heavy-vehicle--truck-repair/ (https://www.hccs.edu/programs/areas-of-study/public-safety-transportation--consumer-services/heavy-vehicle--truck-repair/)

Process for Expressing Concerns about the Course

If you have any concerns about this course, please reach out to your instructor for assistance first. If you instructor is not able to assist you, then you may wish to contact the Department Chair.

Department Chair: Mr. Hugh Mann, hugh.mann@hccs.edu, 713-718-8121