



This course is an overview of operation and repair of alternative fuel systems. Topics include a review of basic electricity, Hybrid electric motors, ICE, transaxles, regenerative brakes, air conditioning, steering, batteries, and safety as well as electric vehicle conversions, CNG vehicles, LPG vehicles, LNG, fuel cells, hydrogen, biodiesel, and alcohol based fuels. It will prepare students for ASE certification test F1.

PREREQUISITES: AUMT 1407 Automotive Electrical Systems, AUMT 1405 Introduction to Automotive Technology

COURSE OBJECTIVE

The objective of this course is to prepare students for entry-level employment and certification through ASE and the Texas Railroad Commission. By the end of this course you, the student, should have a thorough grasp of hybrid vehicle operation, problem diagnosis, and maintenance as well as basic knowledge of electric vehicle conversions, CNG vehicles and conversions, LPG vehicles and conversions, LNG, fuel cells, hydrogen, biodiesel, and alcohol based fuels.

TEXTS AND REFERENCES USED:

1. Hybrid, Electric, and Fuel-Cell Vehicles, 2nd Edition

Jack Erjavec ISBN-10: 0-8400-2395-2 / ISBN-13: 978-0-8400-2395-7

2. Manufacturer's service manuals.
3. Selected films and charts from various sources.
4. PowerPoint presentations.
5. ONLINE: www.austincc.edu/autotech/ and www.austincc.edu
6. Library resources:
7. Blackboard <https://acconline.austincc.edu/webapps/portal/frameset.jsp>

A student of this institution is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

INSTRUCTOR SPECIFIC INFORMATION

The following instructor information should be on the syllabus:

- instructor's name
- phone number(s) (instructor's office phone or Voice Box for adjunct instructors)
- office hours and location of office or means of accessing virtual office hours
- information on how conferences outside of office hours can be arranged

- ACC email address
- other avenues for contacting the professor, as appropriate (through BlackBoard, e.g.)

As a general rule, instructors should avoid interacting with students through social media or providing personal phone numbers.

COURSE DESCRIPTION

- **Credit Hours: 4**
- **Classroom Contact Hours per week: 3 (for a 16-week class)**
- **Laboratory Contact Hours per week: 3 (for a 16-week class)***

For clarity and alignment with SACS-COC expectations, the credit and contact hours should be explicitly stated. An example for a 16-week lab science class is given. Other non-classroom activity hours should be used as appropriate (e.g., clinical, internship, etc.) The description from the college catalog should also go here and can be added to as needed. If there is a required field activity, service-learning, or other activity outside of class, that should be mentioned, as well other general information that seems appropriate. If it is a workforce (WECM) course rather than a transfer (ACGM) course, some language about transferability should also be added, such as: "Transferability of workforce courses varies. Students interested in transferring courses to another college should speak with their Area of Study (AoS) advisor, Department Chair, and/or Program Director."

STUDENT LEARNING OUTCOMES & GENERAL EDUCATION COMPETENCIES

This is the section in which the student learning outcomes for the course and program are listed. Departments have identified student learning outcomes for every course and for every discipline/program for which they offer an award. In addition, all Core Curriculum courses should list the general education outcomes that they address. If instructors have additional student learning outcomes, they should list them here as well. The [Master Syllabi Repository](#) serves as the primary, publicly available source of what learning outcomes are addressed in each course.

Missed Exam and Late Work Policies

Each instructor should clearly express their policies with regard to missed exams, late homework or laboratory exercises, etc. Again, this helps immensely when dealing with student grade disputes.

Use of the Testing Center

The Testing Centers will allow only limited in person testing and testing time will be limited to the standard class time, typically one and one-half hours. Specifically, only the following will be allowed in the Testing Centers:

- Student Accessibility Services (SAS) Testing: All approved SAS testing
- Assessments Tests: Institutionally approved assessment tests (e.g., TSIA or TABE)
- Placement Tests: Placement tests (e.g., ALEKS)
- Make-Up Exams (for students who missed the original test): Make-up testing is available for all lecture courses but will be limited to no more than 25% of students enrolled in each section for each of four tests
- Programs incorporating industry certification exams: Such programs (e.g., Microsoft, Adobe, etc.) may utilize the ACC Business Assessment Center for the industry certification exams (BACT) at HLC or RRC

The instructor should provide additional information about how they will conduct examinations and other assessments here.

Parent and Family Engagement Services

ACC understands how important parent and family support is to every student's college journey. From parents and siblings to stepparents, grandparents, partners, and loved ones, the Parent and Family Engagement Office at ACC is committed to empowering families to support student success. The office provides a family orientation to ACC, free [workshops](#) explaining the world of higher education (financial aid, student resources, career and transfer services, etc.), a monthly [newsletter](#) full of student success tips, and a website designed to answer family members' frequently asked questions. All students, especially first-generation students, are encouraged to share these resources with their families and invite them to be part of the Riverbat experience. Contact familyengagement@austincc.edu or visit the [Parent & Family Engagement website](#) for more information.

CLASS LECTURES & BLACKBOARD

Some of the information in the book may not be covered in lectures due to time constraints. However, you will still be responsible for reading and understanding it because you may see some of it on a test, quiz, or homework assignment. Also, some of the information covered in lectures may not be in your book. Therefore, you will be able to find all course powerpoints, homework assignments, job sheets, the syllabus, etc. on the blackboard for this course. The blackboard website is or you can find it at the main ACC page www.austincc.edu on the right side of the web page. Course blackboard information may be updated weekly. Software downloads are available at <http://www.austincc.edu/helpdesk/software.html>

INSTRUCTIONAL METHODOLOGY:

Using a combination of computer based instruction, lecture, faculty demonstrations, and lab work students will practice towards mastery of all required NATEF tasks.

COURSE RATIONALE:

Utilizing appropriate safety procedures, explain hybrid vehicle operation, problem diagnosis, and maintenance as well as electric vehicle conversions, CNG vehicles and conversions, LPG vehicles and conversions, LNG, fuel cells, hydrogen, biodiesel, and alcohol based fuels.

COURSE POLICIES:

1. Regular attendance is required. Only limited absences and tardiness will be accepted if a grade better than a "D" is expected. *(1C-1,4, 2A-4)
2. Students are required to maintain a "C" average, or a grade point average of 2.00. This means that the average of all classes must be a "C" in order to obtain either a certificate of completion, or degree. Students who either arrive late for class, leave early, and/or bring no tools cannot expect to complete lab assignments in a timely manner and receive a grade better than "D". For further information see the sections on "graduation" and "Academic Suspension" in the Administration Information area of the current ACC Catalog. *(1A-1, 1C-1,2,4,5, 2A-4)
3. Students are expected to purchase their own tools. A list of the minimum type and number of tools are furnished at the beginning of each semester. Each student will have his/her own tools available for shop work at the beginning of each class period. Loaning or borrowing of tools between students is discouraged. Specialty tools, tools not on the student tool list, are available from the Tool Room.

The college will furnish tools for students who are enrolled in the Introduction to Automotive class. Failure to bring tools after the first four classes after enrollment in the Automotive Program subjects each student to disciplinary action up to and including dismissal from the program.*(1C-5, 2A-2)

4. Safety is always first. Common sense and our certifying agency, NATEF, require that all students wear safety glasses in the shop. Students without safety glasses will be prohibited from any shop activities.*(1C-2,4,5)

5. Each student is strongly encouraged to participate in class. In any classroom situation that includes discussion and critical thinking, there are bound to be many differing viewpoints. These differences enhance the learning experience and create an atmosphere where students and instructors alike will be encouraged to think and learn. On sensitive and volatile topics, students may sometimes disagree not only with each other but also with the instructor. It is expected that faculty and students will respect the views of others when expressed in classroom discussions.

6. By applying to and registering at Austin Community College, students agree to abide by the Student Discipline Policy and Student Rights and Responsibilities regulations published in the ACC College Catalog and this Student Handbook. Acts prohibited by the college for which discipline may be administered include student profit associated with any lab project, scholastic dishonesty, including but not limited to cheating on an exam or quiz, plagiarizing, and unauthorized collaboration with another in preparing outside work. Academic work submitted by students shall be the result of their thought, research or self-expression. Academic work is defined as, but not limited to tests, quizzes, whether taken electronically or on paper, projects, either individual or group; classroom presentations, and homework. Prohibited acts include disruptive conduct of any kind. Disruptive conduct is defined as, but not limited to: Behavior that significantly interferes with or disrupts any ACC teaching, research, administrative, disciplinary, public service or other authorized activity. Behavior that threatens the health or safety of members of the ACC community, visitors to ACC, or participants at ACC-sponsored events, or willful negligence in the performance of lab projects. The minimum penalty for violation of these policies is a grade of "F" for the course.

7. Each ACC campus offers support services for students with documented physical or psychological disabilities. Students with disabilities must request reasonable accommodations through the Office for Students with Disabilities on the campus where they expect to take the majority of their classes. Students are encouraged to do this three weeks before the start of the semester.

8. Proper shop attire will be worn at all times. This includes, but is not limited to, work pants, a work shirt with a collar, work boots or shoes, and safety glasses, all similar to what would be worn at a professional automotive repair shop. Flip flops, sandals, loose baggy clothing, dangling jewelry, or clothing that is too revealing in nature are not allowed. The student may be sent home at the instructor's discretion. Violations will lower the student's grade and possibly cause the student to fail the course.

ATTENDANCE POLICY:

Attendance on the first day of class is mandatory. Students who miss the first day of class may be dropped from the course. The College System believes that regular attendance in all classes is necessary and makes no distinction between excused and unexcused absences. I will personally excuse within reason and at my discretion. This applies only to the number of absences counted towards dropping a student, not daily/shop grades.

EXCESSIVE ABSENCES/ WITHDRAWAL:

Although it is the responsibility of the student to drop a course for nonattendance, the instructor has full authority to drop a student. Students who continue attending class after the official withdrawal

date has passed are not eligible to be withdrawn by the instructor. These students must be assigned a grade on the final grade sheet. It is the responsibility of each student to ensure that his or her name is removed from the rolls should they decide to withdraw from the class. The instructor does, however, reserve the right to drop a student should he or she feel it is necessary. If a student decides to withdraw, he or she should also verify that the withdrawal is recorded before the Final Withdrawal Date. The student is also strongly encouraged to keep any paperwork in case a problem arises. Students are responsible for understanding the impact that withdrawal from a course may have on their financial aid, veterans' benefits, and international student status. Per state law, students enrolling for the first time in Fall 2007 or later at any public Texas college or university may not withdraw (receive a "W") from more than six courses during their undergraduate college education. Some exemptions for good cause could allow a student to withdraw from a course without having it count toward this limit. Students are strongly encouraged to meet with an advisor when making decisions about course selection, course loads, and course withdrawals.

DISTANCE EDUCATION

Students will use the Blackboard learning management system for assignment instructions, submitting assignments, and collaboration.

TECHNOLOGY SUPPORT SERVICES

In response to COVID-19-related campus closures, Austin Community College now provides free, secure drive-up WiFi to students and employees in the parking lots of all campus locations. WiFi can be accessed seven days a week, 7 am to 11 pm. Additional details are available at <https://www.austincc.edu/coronavirus/drive-up-wifi>. Students who submit the **Student Technology Access Form** and indicate they need help accessing their online learning environment to successfully complete their courses are eligible to check out an ACC iPad for use during the semester. You must be registered for a credit course, Adult Education, or Continuing Education course

INCOMPLETE

An incomplete (grade of "I") will only be given in Fall, 2020 due to extenuating circumstances. What constitutes "extenuating circumstances" is left to the instructor's discretion. If a grade of I is given, the remaining course work must be completed by a date set by the student and professor. This date may not be later than two weeks prior to the end of the Spring, 2021 semester. A grade of I also requires completion and submission of the Incomplete Grade form, to be signed by the faculty member (and student if possible) and submitted to the department chair. Students receiving an "I" for Spring 2020 or Summer 2020 may complete remaining course requirements and convert the I to a completion grade during the Fall 2020 semester. The final date for conversion of spring and summer semester incompletes is November 19th, 2020, the published final fall conversion date for Incompletes. Students receiving an "I" for Spring 2020 or Summer 2020 who have not completed course requirements by the November 19th, 2020 extended conversion date may request that the I be converted to a W and that they receive a voucher to take the course in Spring 2021. These requests will be considered by the COVID-19 Spring 2021 Hardship Review Committee. Approval would require extenuating circumstances that did not allow the student to complete the course requirements during the extended completion time. Students may request an Incomplete from their faculty member if they believe circumstances warrant. The faculty member will determine whether the Incomplete is appropriate to award or not. The following processes must be followed when awarding a student an I grade.

1. Prior to the end of the semester in which the “I” is to be awarded, the student must meet with the instructor to determine the assignments and exams that must be completed prior to the deadline date. This meeting can occur virtually or in person. The instructor should complete the Report of Incomplete Grade form.
2. The faculty member will complete the form, including all requirements to complete the course and the due date, sign (by typing in name) and then email it to the student. The student will then complete his/her section, sign (by typing in name), and return the completed form to the faculty member to complete the agreement. A copy of the fully completed form can then be emailed by the faculty member to the student and the department chair for each grade of Incomplete that the faculty member submits at the end of the semester.
3. The student must complete all remaining work by the date specified on the form above. This date is determined by the instructor in collaboration with the student, but it may not be later than the final withdrawal deadline in the subsequent long semester.
4. Students will retain access to the course Blackboard page through the subsequent semester in order to submit work and complete the course. Students will be able to log on to Blackboard and have access to the course section materials, assignments, and grades from the course and semester in which the Incomplete was awarded.
5. When the student completes the required work by the Incomplete deadline, the instructor will submit an electronic Grade Change Form to change the student’s performance grade from an “I” to the earned grade of A, B, C, D, or F.

If an Incomplete is not resolved by the deadline, the grade automatically converts to an “F.” Approval to carry an Incomplete for longer than the following semester or session deadline is not frequently granted

DETAILED GRADING FORMULA:

Attendance: **15%**

This grade is based upon your attendance and punctuality only. Being late and leaving early are reflected in this grade. You can miss no more than 3 classes and still achieve a passing grade. Once you’ve missed 4 classes, you must drop or receive an F!!!

Homework: **10%**

This grade is based upon homework assigned and completed during the semester. Homework will come from the textbook or online as assigned by the instructor as well as handouts. Homework will be assigned that is not in the book. By the end of the semester, the homework must be completed for every assigned chapter of the book. Homework is due one week from when it is assigned. Late homework may have points deducted at my discretion or not be accepted at all.

Job Sheets, Work orders: **10%**

Job Sheets are assigned with each topic covered and are completed in the shop. For shop work that is not part of an assignment, a work order or work log sheet will be filled out at the end of class so I can keep track of the shop work you’ve completed during the semester. This grade is based upon job sheets and shop work completed for the semester.

Quizzes: **10%**

Any quiz that is given will be at the beginning of class. This grade is based upon the average of all quizzes during the semester. You cannot make up a missed quiz.

Exams: 20%

Exams will be given during the semester covering a portion of the course material. The average of all tests will be worth 20% of your final grade. Tests may be on paper, online, on the computer, hands-on, or a combination of these.

Daily Grade: 30%

This grade is based upon your bringing tools, books, and supplies to every class, your participation in shop work, lectures, and class discussions, and cleaning up after yourself at the end of each class. It will also be based upon your shop attire, attitude, and ability to show proficiency for each assigned ASE/NATEF task.

Notebook: 5%

A notebook will be turned in at the end of the semester. See the last page of the syllabus. Your notebook will be graded on completeness including syllabus, tests, quizzes, homework for each chapter, handouts, worksheets, job sheets and notes. The notebook will count 5% of your final grade.

Research Paper: 5 points

This grade is based on completion of the semester's research paper or power point presentation according to the criteria listed at the end of this syllabus. It will count for 5 points of your total daily grade.

THE GRADING SCALE:

90-100 A
80-89 B
70-79 C

60-69 D
0-59 F

HEALTH & SAFETY PROTOCOLS

All ACC campuses and centers have one entrance for students and employees. The college is limiting facility access to faculty, essential staff, and students who are enrolled in Career and Technical Education courses. Each person is required to take the following steps:

1. Self-screen for COVID-19 symptoms using the ACC Health Screening App. There are three secure ways to use the app — 1) download it on your phone (recommended), 2) download the web link, or 3) you may use an iPad that is available at the door. It is easy to download and use. Answer a series of quick questions and the app will give you results. Save the results to show at the door upon entry. Get the app here at:

<https://www.austincc.edu/coronavirus/acc-health-screening-app>

2. ACC ID badges or Student ID cards will be required for all employees and students upon entry. Employees and students must display their I.D. at all times.

3. Temperature checks will be conducted with a no-touch thermometer. If you have a fever 100 degrees Fahrenheit or greater, you will not be admitted to the building.

4. ACC Health Screen App results will be requested at the door. If you are unable to download the app, an iPad will be provided at the door so that you may answer a series of questions to determine if you have COVID-19 symptoms which include:

Cough	Sore throat
Shortness of breath or difficulty breathing	Loss of taste or smell
Chills	Diarrhea
Repeated shaking with chills	
Muscle pain	Fever
Headache	

Have you come into contact with anyone who tested positive for COVID-19 within 14 days?

If you do not pass the pre-screening, you will receive specific information on healthcare procedures and instructions for what you need to know to be able to return to campus.

5. Facial coverings/masks are required for anyone entering an ACC building. You must wear a facial covering/mask at all times. In private spaces such as an individual office, your facial covering may be removed if you are alone. These guidelines are consistent with guidance from the Centers for Disease Control and Prevention, which makes clear that facial coverings and social distancing are among the most effective measures for limiting the spread of COVID-19. Students should arrive on campus early to ensure enough time to get through the screening line.

On-Campus Protocols

- Wash and sanitize your hands prior to entering a classroom, office, or facility. Hand sanitizing stations, disinfecting wipes, soap, and water are readily available.
- Continue to practice good hygiene by washing your hands frequently for 20 seconds.
- Practice social distancing with all individuals by maintaining at least six feet of separation.
- Follow floor stickers that are placed throughout the campus to help guide social distancing in high traffic areas.
- A maximum of two people at a time will be allowed in elevators.
- Facial coverings/masks must remain on at all times. A facial covering may only be removed as allowed by the course safety plan (i.e., when alone in private spaces such as an individual office).
- For the safety of all who are on-campus, water fountains will be turned off, vending machines will have limited services, all food services will be suspended, and common area furniture will be removed. Please plan accordingly.

Classroom Protocols

- Schedules are staggered and courses have been divided into smaller sections to minimize contact with individuals.
- Seating for standard classrooms is limited to nine students and one instructor unless the classroom is deemed large enough to handle more by the Safety & Operations Office.
- Faculty will assign seats to students to keep them at a safe distance from one another. It's imperative that students follow seat assignments in order to track any contamination or the possible spread of COVID-19.
- Plexi Guards are installed on faculty desks if there is not at least nine-feet between the desk and the first row of students.
- Once inside the classroom, facial coverings must continue to be worn.
- ACC encourages students to wipe down their desks before class begins. Supplies will be provided in each classroom.

Deep Cleaning Protocols

- ACC's Campus Operations Quality Control staff will regularly and frequently disinfect any and all high touch surfaces such as door knobs, tables, chairs, and restrooms.
- Staff will disinfect classrooms as soon as classes are over.
- Students and employees will be reminded to disinfect personal electronics on a regular basis.
- Hand sanitizer will be available in or near every classroom.
- Sufficient disinfecting supplies are available to maintain hygienic standards throughout the day.
- These disinfectant procedures will occur after each class and at the end of every day.

Illness & Travel Protocols

- If you feel sick, feverish, or unwell, please do not come to campus or office.
- You will need to get tested for COVID-19 and report the results (positive or negative) to ACC's COVID-19 Liaison (see below).
- If you become ill in the classroom or inside an ACC facility, you will be asked to go into an isolation room to take the state's online self-assessment.
- Isolation rooms are available on each campus and center with resources and information to help you learn about the next steps and where to go for a COVID-19 test.
- All areas used by anyone who is sick or tests positive for COVID-19 will be immediately closed, waiting for the appropriate period of time before it is thoroughly deep cleaned, disinfected, and deemed safe to reopen.
- If you have been in contact with someone who tested positive for COVID-19 within the last 14 days, you must self-report. ACC's Self-Report form is available online.
- ACC has identified a primary COVID-19 Liaison responsible for communicating and coordinating with local health departments. Our liaison is Michael Garcia, Executive Director of Regulatory Affairs, sem-helpdesk@austincc.edu.

A training video is available [here](https://www.austincc.edu/coronavirus/health-and-safety-protocols) at: <https://www.austincc.edu/coronavirus/health-and-safety-protocols>

RELIGIOUS HOLIDAYS:

If you observe a religious holiday and miss class, you must notify your instructor in writing two weeks in advance to arrange to take a test or make up an assignment. A religious holiday is a holy day observed by a religion whose place of worship is exempt from property taxation under Section 11.20, Tax Code.

ADMINISTRATIVE WITHDRAWAL:

Students may be dropped from a course after accumulating absences in excess of 12.5% of the total hours of instruction (lecture and lab). For a 4 credit-hour lecture/lab course meeting 5 hours per week (96 hours of instruction), you can be dropped after 12 hours of absence. Administrative drops are at the discretion of the instructor. Failure to withdraw officially may result in a grade of F in the course. Do not expect the instructor to drop you!

TARDINESS POLICY:

Students who are not present when roll is taken will be marked tardy and may be marked absent if you do not let the instructor know you are present. Excessive tardiness will affect your grade. Students more than 30 minutes late may be counted absent.

MAKE-UP POLICY:

All students that miss assignments must ask the instructor for make-up work. If make-up work is not asked for, it will not be given. All assignments with no grade at the end of the grading period will receive a grade of zero for that particular assignment. Make-up work may not be identical to the original assignment.

LATE ASSIGNMENTS:

Assignments that are turned in late may, at the instructor's discretion, have points deducted from them or may not be accepted at all.

TOOL POLICY:

After the first day of class, students must bring their tools to class every day. If you fail to bring your tools you cannot complete the shop tasks. Students must bring all the tools listed on the tool lists, or required by the instructor, every day to class. Borrowing of tools is discouraged.

TESTING CENTER POLICY

All testing is currently online. While campuses are closed, exams for courses will be online tests that students can take from home. For more information about online testing at ACC, visit the Online Testing resource page: <https://www.austincc.edu/academic-and-career-programs/acconline/testing>.

ACADEMIC DISHONESTY:

Scholastic dishonesty includes, but is not limited to, cheating on a test, plagiarism, and collusion. Cheating on a test includes:

1. Copying from another student's test paper; using, during a test, materials not authorized by the person giving the test.
2. Collaborating with another student during a test without permission.
3. Knowingly using, buying, selling, stealing, transporting, or soliciting in whole or part the contents of an un-administered test.
4. Bribing another person to obtain a test that is to be administered.

Plagiarism means the appropriation of another's work and the unacknowledged incorporation of that work in one's own work for credit. Collusion means the unauthorized collaboration with another person in preparing written work, particular test, or assignment involved. In extreme cases or for repeated violations, guilty students can be assigned a failing grade in a course or recommended for probation or dismissal from the College System.

AUTOMOBILES FOR SHOP WORK:

Although vehicles are always needed for shop work, whose car and which car is worked on first is not considered to be an important part of the course. All cars to be worked on in the shop must first be approved by the instructor. Even though emergencies occur with cars breaking down, we are not here to schedule work as a garage would. Time schedules will not be considered or given as related to repair work of any given automobile. Only work related to the course will be considered. No work will be performed on a car if the subject has not yet been covered in the classroom, unless authorized by the instructor. Vehicles older than 10 years may be excluded.

CARE AND CLEANING OF TOOLS, EQUIPMENT, AND THE SHOP AREA:

All students will be expected to participate in shop and classroom cleanup at the end of each class period. Sufficient time will be allotted by the instructor for this purpose. All tools will be cleaned and put in the proper place before class will be dismissed. Leaving your work area dirty will adversely affect your grade.

NATEF:

The Board of the National Institute for Automotive Service Excellence (ASE) is the responsible body for the Automobile Technician Training Certification Program. The certification program is under the direct supervision of the board of trustees of The National Automotive Technician Education Foundation (NATEF). The purpose of the Automobile Technician Training Certification Program is to improve the quality of training offered at the secondary and post-secondary level. ACC is currently certified in all automotive areas. Homework due each week will be from the weekly homework on blackboard.

COURSE OUTLINE: (SUBJECT TO CHANGE)

- CLASS 1: ORIENTATION / SAFETY
- CLASS 2: CHAPTER 1: An Introduction to Electric Vehicles
- CLASS 3: CHAPTER 2: Electrical Basics
- CLASS 4: CHAPTER 3: Motor and Generator Basics
- CLASS 5: CHAPTER 4: Battery Basics
- CLASS 6: CHAPTER 5: The Basics of a Battery Operated Electrical Vehicle
- CLASS 7: CHAPTER 6: Hybrid Basics and Series-Type Hybrids
- CLASS 8: TEST 1
- CLASS 9: CHAPTER 7: Mild and Assist Hybrids
- CLASS 10: CHAPTER 8: Power-Split-Type Full Hybrids
- CLASS 11: CHAPTER 9: Other Full Hybrids Designs
- CLASS 12: CHAPTER 10: Basic Hybrid Maintenance and Service
- CLASS 13: CHAPTER 11: Fuel Cell and Other Alternative Power Vehicles
- CLASS 14: TEST 2
- CLASS 15: FINAL, POST TEST

COLLEGE POLICIES

Campus Operations

To limit the spread of COVID-19, ACC campuses remain closed to all but faculty, essential staff, and students who are enrolled in certain Career and Technical Education courses. Face-to-face classes and services are limited.

Statement on Academic Integrity

Austin Community College values academic integrity in the educational process. Acts of academic dishonesty/misconduct undermine the learning process, present a disadvantage to students who earn credit honestly, and subvert the academic mission of the institution. The potential consequences of fraudulent credentials raise additional concerns for individuals and communities beyond campus who rely on institutions of higher learning to certify students' academic achievements, and expect to benefit from the claimed knowledge and skills of their graduates. Students must follow all instructions given by faculty or designated college representatives when taking examinations, placement assessments, tests, quizzes, and evaluations. Actions constituting scholastic dishonesty include, but are not limited to, plagiarism, cheating, fabrication, collusion, falsifying documents, or the inappropriate use of the college's information technology resources. Further information is available at <https://www.austincc.edu/about-acc/academic-integrity-and-disciplinary-process>

STUDENT RIGHTS & RESPONSIBILITIES:

At Austin Community College, we work to provide good educational opportunities for all students. To help you in your class this semester, please read these paragraphs to understand what you can expect from your instructor, and what your instructor expects from you. Students at ACC have the same rights and protections under the Constitution of the United States. These rights include freedom of speech, peaceful assembly, petition and association. As members of the community, students have the right to express their own views, but must also take responsibility for giving the same rights to others and not interfere or disrupt the learning environment. Students are entitled to fair treatment, are expected to act consistently with the values of the college, and obey local, state and federal laws. www.austincc.edu/srr. As a student of Austin Community College you are expected to abide by the Student Standards of Conduct.

<https://www.austincc.edu/students/students-rights-and-responsibilities/student-standards-of-conduct>

Senate Bill 212 and Title IX Reporting Requirements

Under Senate Bill 212 (SB 212), the faculty and all College employees are required to report any information concerning incidents of sexual harassment, sexual assault, dating violence, and stalking committed by or against an ACC student or employee. Federal Title IX law and College policy also require reporting incidents of sex- and gender-based discrimination and sexual misconduct. This means faculty and non-clinical counseling staff cannot keep confidential information about any such incidents that you share with them. If you would like to talk with someone confidentially, please contact the District Clinical Counseling Team who can connect you with a clinical counselor on any ACC campus: (512) 223-2616, or to schedule online: <https://www.austincc.edu/students/counseling>. While students are not required to report, they are encouraged to contact the Compliance Office for resources and options: Charlene Buckley, District Title IX Officer, (512) 223-7964; compliance@austincc.edu. If a student makes a report to a faculty member, the faculty member will contact the District Title IX Officer for follow-up.

Student Complaints

A defined process applies to complaints about an instructor or other college employee. You are encouraged to discuss concerns and complaints with college personnel and should expect a timely and appropriate response. When possible, students should first address their concerns through informal conferences with those immediately involved; formal due process is available when informal resolution cannot be achieved. Student complaints may include (but are not limited to) issues regarding classroom instruction, college services and offices on the basis of actual or perceived race, color, national origin, religion, age, gender, gender identity, sexual orientation, political affiliation, or

disability. Further information about the complaints process, including the form used to submit complaints, is available at:

<http://www.austincc.edu/students/students-rights-and-responsibilities/student-complaint-procedures>

Statement on Privacy

The Family Educational Rights and Privacy Act (FERPA) protects confidentiality of students' educational records. Grades cannot be provided by faculty over the phone, by email, or to a fellow student.

Recording Policy

To ensure compliance with the Family Education Rights and Privacy Act (FERPA), student recording of class lectures or other activities is generally prohibited without the explicit written permission of the instructor and notification of other students enrolled in the class section. Exceptions are made for approved accommodations under the Americans with Disabilities Act. Recording of lectures and other class activities may be made by faculty to facilitate instruction, especially for classes taught remotely through BlackBoard Collaborate or another platform. Participation in such activities implies consent for the student to be recorded during the instructional activity. Such recordings are intended for educational and academic purposes only.

Safety Statement

Health and safety are of paramount importance in classrooms, laboratories, and field activities. Students are expected to learn and comply with ACC environmental, health and safety procedures and agree to follow ACC safety policies. Emergency Procedures posters and Campus Safety Plans are posted in each classroom and should be reviewed at the beginning of each semester. All incidents (injuries/illness/fire/property damage/near miss) should be immediately reported to the course instructor. Additional information about safety procedures and how to sign up to be notified in case of an emergency can be found at <http://www.austincc.edu/emergency>. Everyone is expected to conduct themselves professionally with respect and courtesy to all. Anyone who thoughtlessly or intentionally jeopardizes the health or safety of another individual may be immediately dismissed from the day's activity and will be referred to the Dean of Student Services for disciplinary action. In the event of disruption of normal classroom activities due to an emergency situation or a continuing illness outbreak, the format for this course may be modified to enable completion of the course. In that event, students will be provided an addendum to the class syllabus that will supersede the original version.

Campus Carry

The Austin Community College District concealed handgun policy ensures compliance with Section 411.2031 of the Texas Government Code (also known as the Campus Carry Law), while maintaining ACC's commitment to provide a safe environment for its students, faculty, staff, and visitors. Beginning August 1, 2017, individuals who are licensed to carry (LTC) may do so on campus premises except in locations and at activities prohibited by state or federal law, or the college's concealed handgun policy. It is the responsibility of license holders to conceal their handguns at all times. Persons who see a handgun on campus are asked to contact the ACC Police Department by dialing 512-223-7999. Please refer to the concealed handgun policy online at <http://austincc.edu/campuscarry>

Discrimination Prohibited

The College seeks to maintain an educational environment free from any form of discrimination or harassment including but not limited to discrimination or harassment on the basis of race, color, national origin, religion, age, sex, gender, sexual orientation, gender identity, or disability. Faculty at the College are required to report concerns regarding sexual misconduct (including all forms of sexual harassment and sex and gender-based discrimination) to the Manager of Title IX/Title VI/ADA Compliance. Licensed clinical counselors are available across the District and serve as confidential resources for students. Additional information about Title VI, Title IX, and ADA compliance can be found in the ACC Compliance Resource Guide available at:

<https://drive.google.com/file/d/1o55xINAWNvTYgl-fs-JbDyuaMFDNvAjz/view>.

Use of ACC email

All College e-mail communication to students will be sent solely to the student's ACC email account, with the expectation that such communications will be read in a timely fashion. ACC will send important information and will notify students of any college-related emergencies using this account. Students should only expect to receive email communication from their instructor using this account. Likewise, students should use their ACC email account when communicating with instructors and staff. Information about ACC email accounts, including instructions for accessing it, are available at: <http://www.austincc.edu/help/accmail/questions-and-answers>

STUDENT SUPPORT SERVICES

The success of our students is paramount, and ACC offers a variety of support services to help, as well as providing numerous opportunities for community engagement and personal growth.

Student Support

ACC strives to provide exemplary support to its students and offers a broad variety of opportunities and services. Information on these campus services and resources is available at <http://www.austincc.edu/students>. A comprehensive array of student support services is available online at:

<https://www.austincc.edu/coronavirus/remote-student-support>

Student Accessibility Services

Students with documented disabilities who need academic or other accommodations must request them through the office Student Accessibility Services (SAS). SAS offices are located at each major campus. Students are encouraged to request accommodations when they register for courses or at least three weeks before the start of the semester; otherwise, the provision of accommodations may be delayed. Students who have received approval for accommodations from SAS for this course must provide the instructor with the document titled "Notice of Approved Accommodations" from SAS before accommodations will be provided. Accommodations will not be provided retroactively. Arrangements by the instructor for academic accommodations can only be made after he or she receives the "Notice of Approved Accommodations" from the student. Additional information about Student Accessibility Services is available at

<https://www.austincc.edu/offices/student-accessibility-services-and-assistive-technology>

Academic Support

ACC offers academic support services on all of its campuses. These services, which include online tutoring, academic coaching, and supplemental instruction, are free to enrolled ACC students. Tutors are available in a variety of subjects ranging from accounting to pharmacology. Students may receive these services on both a drop-in and referral basis.

[An online tutor request can be made here:](https://de.austincc.edu/bbsupport/online-tutoring-request/)
<https://de.austincc.edu/bbsupport/online-tutoring-request/>

[Additional tutoring information can be found here:](https://austincc.edu/onlinetutoring)
austincc.edu/onlinetutoring

Library Services

ACC Library Services is operating online while campuses are closed during the current pandemic. Libraries continue to support ACC courses and programs and provide students with research and assignment assistance from expert faculty librarians. ACC students have full rights and privileges to access Library Services online 24/7 via the ACC Library website, and students must use their ACC eID logins to access all online materials, including ebooks, articles from library databases, and streaming videos. ACC Libraries provide the “Ask a Librarian” service, which allows students to reach a librarian 24/7 through online chat or complete an online form for in-depth questions. Faculty librarians are available via email and virtually to meet with you by appointment seven days a week. Students can also contact the Library for questions about their library account, registration holds, and technology/device distribution options.

- Library Website: <http://library.austincc.edu>
- Library Information & Services during COVID-19: <https://researchguides.austincc.edu/LSinfoCOVID19>
- Ask a Librarian 24/7 chat and form: <https://library.austincc.edu/help/ask.php>
- Library Hours of Operation by Location: <https://library.austincc.edu/loc/>
- Email: library@austincc.edu

Student Organizations

ACC has over seventy student organizations, offering a variety of cultural, academic, vocational, and social opportunities. They provide a chance to meet with other students who have the same interests, engage in service-learning, participate in intramural sports, gain valuable field experience related to career goals, and much else. Student Life coordinates many of these activities, and additional information is available at <http://sites.austincc.edu/sl/>.

Personal Support

Resources to support students are available at every campus. To learn more, ask your professor or visit the campus Support Center. All resources and services are free and confidential. Some examples include, among others:

- Food resources including community pantries and bank drives can be found here: <https://www.centraltexasfoodbank.org/food-assistance/get-food-now>
- Assistance with childcare or utility bills is available at any campus Support Center: <http://www.austincc.edu/students/support-center>.
- The Student Emergency Fund can help with unexpected expenses that may cause you to withdraw from one or more classes: <http://www.austincc.edu/SEF>.
- Help with budgeting for college and family life is available through the Student Money Management Office: <http://sites.austincc.edu/money/>.

A full listing of services for student parents is available at:

<https://www.austincc.edu/students/child-care>

- The CARES Act Student Aid will help eligible students pay expenses related to COVID-19:

<https://www.austincc.edu/coronavirus/cares-act-student-aid>.

Mental health counseling services are available throughout the ACC Student Services District to address personal and or mental health concerns: <http://www.austincc.edu/students/counseling> .

If you are struggling with a mental health or personal crisis, call one of the following numbers to connect with resources for help. However if you are afraid that you might hurt yourself or someone else, call 911 immediately.

Free Crisis Hotline Numbers:

- Austin / Travis County 24 hour Crisis & Suicide hotline: 512-472-HELP (4357)
- The Williamson County 24 hour Crisis hotline: 1-800-841-1255
- Bastrop County Family Crisis Center hotline: 1-888-311-7755
- Hays County 24 Hour Crisis Hotline: 1-877-466-0660
- National Suicide Prevention Lifeline: 1-800-273-TALK (8255)
- Crisis Text Line: Text “home” to 741741
- o Substance Abuse and Mental Health Services Administration (SAMHSA) National Helpline: 1-800-662-HELP (4357)
- National Alliance on Mental Illness (NAMI) Helpline: 1-800-950-NAMI (6264)

Illness

Any ACC student or employee with symptoms or exposure to the COVID-19 virus should inform their professor(s) or supervisor and complete the college’s self reporting form:

https://cm.maxient.com/reportingform.php?AustinCC&layout_id=124

You can expect the instructor to:

- Inform you in the first week of class of course content and grading procedures through the course syllabus. The course syllabus will contain information about dates of tests and assignments; make-up policies; late policies; the instructor’s office hours; the instructor’s telephone number; and the method of determining the course grade.
- Meet with you, either before class or after class, or by appointment.
- Discuss with you any problems that you have that relate to the class.
- Treat you with courtesy, even when there is disagreement.

The instructor expects you to:

- Be in class 100% of the time. If you are absent more than 12.5% of the class due to absence, or tardiness, you may be dropped from the class.
- Find out about work you have missed. Keep a copy of the course syllabus. Arrange to make up for missed work, if possible.
- Behave appropriately in class. This means:
 1. not speaking with other students while the instructor is lecturing
 2. not leaving the classroom during class except when absolutely necessary
 3. not entering class late or leaving early, except in emergencies
 4. not working on other class work during class lecture or discussion time
 5. not bringing children to class
 6. not using phones or computers during lecture
 7. not bringing food or drinks into areas where they are forbidden

Disruptive behavior will result in Security being called. Disruptive students will be removed from class. Disruptive or inappropriate behavior will affect your grade and may result in Security being called. Disruptive students may be removed from class. Students who repeatedly behave inappropriately or fail to adhere to class rules will be warned verbally first, then will receive a written warning, and finally may be removed from the course.

Students are also expected to:

- Purchase required textbooks and other equipment during the first week of class.
- Discuss with the instructor problems that you are having with the class before asking others for help in resolving the situation.
- Check on your grades often and discuss concerns early -- do not wait until the last week of the semester.
- Treat the instructor with courtesy, even when there is disagreement. Also, treat other students with courtesy.

The college expects you to:

Read the catalog and handbook to inform yourself of all policies. If you experience any problems with your class that I cannot rectify, please discuss the problem with the Automotive Department Head, Mike Shoebroek, at 223-0352, or Kristin Farrell at 223-0346