VICTOR VALLEY COLLEGE SYLLABUS
SPRING 2018

Course Number: 82 Course Title: Automotive Electrical Repair Units: 4.00

Section Number: 64126 Class Hours: 6:00PM-7:25PM 7:35PM-9:00PM,

Days: Tuesday, Thursday Bldg. 67 Room Number: 3

Instructor Name: Jerid Scarborough Instructor E-mail: Jerid.Scarborough@vvc.edu

Phone Cell 1(760) 617-6720

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Important Dates

Spring Term Begins	February 12
Presidents Day Lincoln	February 16
College Closed (no classes)	February 17
Presidents Day Washington	February 19
Spring Break Holiday (college closed)	March 30
College Closed (no classes)	March 31
Spring Break (no classes-offices open)	April 9 – 13
Memorial Day Holiday (college closed)	May 28
Commencement	June 8
Spring Semester Ends	June 9
Sixteen (16) week term	February 12 – June 9
Off-Campus Twelve (12) week term	February 12 – May 12
(Does not follow VVC calendar, see that site's calendar)	
First Twelve (12) week term	February 12 – May 12
Second Twelve (12) week term	March 12 – June 9
First Eight (8) week term	February 12 – April 7
Second Eight (8) week term	April 16 – June 9

NOTE – CAMPUS IS CLOSED and CLASSES WILL NOT BE HELD ON CAMPUS THE FOLLOWING DATES:

February, 14th, 16th, 19th, March 30th, 31st, April 9th, 10th, 11th, 12th, 13th, 14th, and May 28th

STATEMENT OF ACCESS: Students with special needs are encouraged to meet with instructors to discuss the opportunity for academic accommodation and referral to Disabled Students Programs and Services (DSPS) and services per Administrative Procedure (AP 3440).

Visit Victor Valley College online at Victor Valley College Website [URL link is www.vvc.edu]

PREREQUISITE: NONE

REQUIRED TEXTBOOK(S

1. **CDX Light Vehicle 1 year online access pack: 9781284119541**

CDX E-book

Access to CDX on-line Automotive Training can be purchased through the VVC book store (packet is located behind the cash register) or the VVC book stores website. You can also purchase directly from the CDX website. CDX is a required component of this class and it is how you will access all of the course material and the ability to take chapter tests and the final exam. In short, you cannot pass this class unless you have your own personalized access to CDX you will not be able to share with another student. Your subscription is valid for one year. If your financial aid has not yet been funded, in some instances the book store will allow a book store voucher contingent on your financial aid funding. You should speak to your financial aid representative for more information.

Below is a coupon code that will allow students to buy CDX products direct.

Code: 2017DMCDX please have students call customer service at 1-800-832-0034, Option 2 for direct CDX purchase by credit card.

DO NOT Call CDX SUPPORT DESK- They help with login issues only.

2. **OPTIONAL***: Ugly's Electrical References***,** 2017 Edition

ISBN-13: 978-1-284-11936-7 | Spiral | © 2017

ADDITIONAL COURSE MATERIALS:

1. ***The students MUST purchase the ASE TEST at the book store beginning, then take the receipt to William for registration and Test schedule***

1. **A three ring binder 1.5inch for your lab task sheets.**

2. **Safety glasses**

3. **VVC Automotive Student Shirt (Available in the bookstore)**

SP2 Shop Safety Program

All students participating in courses within the automotive program must pass the following safety courses on the SP2 website.

1. Mechanical Safety
2. Mechanical Pollution prevention
3. “Land that Job: Interview skills for Automotive Students”
4. Ethics

The safety program contained on this website is intended to both educate the students on both safety and environmental concerns regarding the automotive industry. The student should log onto the website using the following information and complete all final exams with a grade of 80% or greater. The student will have five attempts at the final exam before the exam will need to be reset by the instructor. Upon completion of each exam the student can print out a certificate suitable for framing or inclusion with a resume. **WITHOUT THE COMPLETION OF THE SP2 EXAMS, STUDENTS WILL NOT BE ALLOWED TO PARTICIPATE IN LAB ASSINGMENTS**.

www.sp2.org

Username: 78442

Password: fact

Pin: Your pin is the last six digits of your college ID#

COURSE DESCRIPTION:

This course provides the student with the knowledge necessary to diagnose and repair automotive malfunctions including lighting systems, electrical instruments and accessories, electrical door components, air bags, and alarm systems. Information covered will include electrical fundamentals, test equipment, electrical circuits, electrical malfunctions, wiring diagrams, and electrical diagnosis.

COURSE OBJECTIVES:

Upon completion of the course the student should be able to:

1. Recognize and identify shop safety, environmental hazards and sustainable environmental practices in an automotive repair facility.
2. Understand and Demonstrate, Electrical laws and fundamentals, as they apply to electrical circuit malfunctions and electrical diagnosis
3. Understand and Demonstrate the proper use of test procedures and equipment
4. Understand and demonstrate the use of wiring diagrams, for electrical diagnosis

5. Recognize and evaluate the condition of an automotive ancillary electrical systems, battery, starting, charging, and automotive lighting systems and malfunctions

STUDENT LEARNING OUTCOMES:

1. Safely and responsibly perform automotive repairs while minimizing impact on the environment
2. Determine necessary repairs to bring the electrical system into industry compliance for drivability and emissions

GRADING POLICY:

Grade Value	**Grading Scale**
SP-2 (Safety)	**10% total**
Lab Assignments	**30%**
Chapter Test	**30%**
Final Exam	**20%**
Student ASE final Exam	**10%**

100% thru 90%	**A**
89% thru 80%	**B**
79% thru 70%	**C**
69% thru 60%	**D**
59% or below	**F**

WITHDRAWAL POLICY:

ATTENDANCE POLICY: Class attendance is not a measure of performance or proficiency. Whether a student is just physically present in the class is not a valid basis for grading. Reference Title 5 Section 55002 of the California Code of Regulations: (A) Grading Policy. The course provides for measurement of student performance in terms of stated course objectives and culminates in a formal, permanently recorded grade based upon uniform standards in accordance with Section 55758 of this Division. The

grade is based on demonstrated proficiency in the subject matter and the ability to demonstrate that proficiency, at least in part, by means of written expression that may include essays, or, in courses where the curriculum committee deems them to be appropriate, by problem solving exercises or skills demonstrations by students.

GENERAL FLOW OF THE CLASS; WHAT TO EXPECT EVERY DAY OF THE WEEK.
*Because we all have to share the lab area and equipment, our class week will be structured in a Thursday to Tuesday format. We will spend two weeks per chapter.
Example: Ch.50

Thursdays:

A new chapter begins. Complete the new chapters pretest before class starts. Make note of what you missed in the pre-test; these would be excellent questions for lecture. We will have a lecture in class room #3 on Ch. 50, which will be continued into the following week.

Friday-Monday:

Ch. 50 reading, assignments and test your knowledge quizzes. (Print your NATEF task sheets for the current chapter) you will need these on Tuesday. Review the skills sheets and media content for the task sheets. * Note: the task sheets cannot be printed in the classroom.

Tuesdays:

Will be lab days, we will do the hands on portion. Complete your NATEF Task sheets for the assigned chapter (chapter 50).

Wednesdays:

Now that you have participated in the lecture, read the chapter, and done most of the hands on task sheets; prepare to review your experiences on Thursday. Test is every other Wednesday

Thursday

Chapter review a reinforcement lecture based on student test scores and lab proficiencies. Make note of where you had difficulties, questions you missed in the pre-test, and labs that you had issues with etc. These would be excellent questions for this lecture. We will continue the same chapter into the following week.

Friday-Monday:

Continue reading and reviewing the media files in CDX. Ch. 50 reading, assignments and test your knowledge quizzes. (Print yourself a new NATEF task sheet if needed; for the current chapter) you will need these on Tuesday. Review the skills sheets and media content for the task sheets.

Tuesdays:

Once again will be lab days. We will do more hands on. Take advantage of this time to reinforce your skills. Complete any outstanding, remaining NATEF Task sheets and any reinforcements for (chapter 50).

Wednesdays:

Now that you have participated in the lectures, read the chapter, and done all of the hands on task sheets; take the final test for the chapter in question. (Ch.50) between now and Thursday at 6:00pm complete the pretest for chapter 51. Do not read ahead we need to know where to focus our energy.

Thursdays:

A new chapter begins. Complete the new chapters pretest before class starts. Make note of what you missed in the pre-test; these would be excellent questions for lecture. We will have a lecture in class room #3 on Ch. 51, which will be continued into the following weeks.

DESCRIPTION OF ASSIGNMENTS and DUE DATES:

WEEK 1 February 12 – 18

TUESDAY 2/13/18 First night of class MEET IN AUTO LAB.

Quiz/Test: ASE 6 chapter 50 Pretest due by Thursday 2/15/18 at 6pm. Make note of what you missed in the pre-test; these would be excellent questions for the lecture on Thursday.

Thursday 2/15/18 lecture will be in classroom #3 on chapter 50. Over the weekend print your NATEF task sheets and be ready to complete task sheets on Tuesday 2/20/18 in lab.

Read: CDX EBook chapter 50

Topic: Tuesday 2/13/18 Introduction to auto 82.0 class overview everything you need to do to get an A

Homework: for Tuesday night.

1. Access Blackboard, Read opening announcement
2. Access Blackboard, Go to “Start Here” in the left column
3. Access Blackboard, Go to “Discussions” / Introduction due 2/17/18 12:00pm
4. Access Blackboard, Go to “SP2” in the left column check your SP2 Courses for current status and complete required safety training
    a. Mechanical Safety
    b. Mechanical Pollution prevention
    c. “Land that Job: Interview skills for Automotive Students”
    d. Ethics

5. Purchase online CDX EBook Access Chapter ASE 6 chapter 50 Pretest and reading assignment pretest is due Thursday 2/15/18 before class, the reading is going to be into the 2nd week but get on this early and take your time and let it soak in. the following Tuesday we will be in lab again performing chapter 50 lab sheets.
6. Safety Glasses due by 2/13/18 beginning of class
7. Thursday homework is to read chapter 50 and complete the quizzes
   Quiz/Test: ASE 6 chapter 50 Pretest due by Thursday 2/15/18 at 6pm. Make note of what you missed in the pre-test; these would be excellent questions for the lecture on Thursday.

WEEK 2 February 20 – 25 (NOTE: Monday, February 19 is a holiday)

- **Tuesday** 2/20/18 we will meet in lab complete NATEF task sheets for ch50. Build series and parallel circuits test boards.
- **Thursday** 2/22/18 lecture will be in classroom #3 on chapter 50. Chapter review and reinforcement lecture based on student test scores and lab proficiencies. Over the weekend print any remaining NATEF task sheets and be ready to complete task sheets on Tuesday 2/27/18

Read / Homework: CONTINUE CDX ASE 6 Ch. 50...

- Homework: Tuesday complete chapter 50, quizzes and final exam take chapter 51 pretest before Thursday 3/1/18. Make note of what you missed in the pre-test; these would be excellent questions for lecture.
  - K50001 – Explain the basic fundamentals of electricity.
  - K50002 – Define units of electrical measurement.
  - K50004 – Explain the sources and effects of electricity.
  - K50005 – Explain the application of basic electrical laws.
  - N50002 – Demonstrate knowledge of electrical/electronic series, parallel, and series-parallel circuits, using principles of electricity (Ohm's law).
  - Ch. 50 Anatomy of a Car
  - Ch. 50. Resources
  - Ch. 50. Media Gallery

WEEK 3 February 26 – March 4

Tuesday: 2/27/18 we will meet in lab complete NATEF task sheets for ch50.

Quiz/Test

- Ch. 50.
- Test Ch. 51. Pretest due Thursday 3/1/18 at 6:00pm. Make note of what you missed in the pre-test; these would be excellent questions for the lecture on Thursday.

Thursday: 3/1/18 we will meet in classroom #3, lecture on chapter 51. Over the weekend print your NATEF task sheets and be ready to complete task sheets on Tuesday 3/6/18 in lab.

Read / Homework:

- K51001 – Describe the function and purpose of electronic components.
- K51002 – Describe wires and wire harnesses
- N51001 – Use wiring diagrams during the diagnosis (troubleshooting) of electrical/electronic circuit problems.
- K51003 – Repair wiring harness.
- Ch. 51 Anatomy of a Car
- Ch. 51. Resources
- Ch. 51. Media Gallery

WEEK 4 March 5 – 11

Tuesday: 3/6/18 we will meet in lab complete NATEF task sheets for ch51.

Thursday: 3/8/18 we will meet in classroom #3, lecture on chapter 51. Chapter review and reinforcement lecture based on student test scores and lab proficiencies. Over the weekend print any remaining NATEF task sheets and be ready to complete task sheets on Tuesday 3/13/18

WEEK 5 March 12 – 18

Tuesday: 3/13/18 we will meet in lab complete NATEF task sheets for ch51.

Quiz/Test:

- Ch. 51. Test
- Ch. 52. Pretest due Thursday 3/15/18 at 6:00pm

Thursday: 3/15/18 we will meet in classroom #3, lecture on chapter 52. Over the weekend print your NATEF task sheets and be ready to complete task sheets on Tuesday 3/13/18 in lab.

Read / Homework:

- K52001 – Explain the purpose, function, and layout of a DMM.
- K52002 – Describe the ranges, settings, and setup of a DMM.
- K52003 – Explain the process of measuring volts, ohms, and amps.
- N52002 – Demonstrate knowledge of electrical/electronic series, parallel, and series-parallel circuits using principles of electricity (Ohm's Law).
- S52004 – Perform basic electrical circuit testing and diagnosis.
- S52006 – Inspect a circuit with jumper leads and/or a test light.
- S52007 – Inspect circuit protection and control devices.
- N52007 – Check electrical/electronic circuit waveforms; interpret readings and determine needed action.
- Ch. 52. Resources
- Ch. 52. Media Gallery

WEEK 6 March 19 – 25

Tuesday: 3/20/18 we will meet in lab complete NATEF task sheets for ch52.

Thursday: 3/22/18 we will meet in classroom #3, lecture on chapter 52. Chapter review and reinforcement lecture based on student test scores and lab proficiencies. Over the weekend print your NATEF task sheets and be ready to complete task sheets on Tuesday 3/27/18 in lab.

WEEK 7 March 26 – 29 (shortened academic week due to holiday)

Tuesday: 3/27/18 we will meet in lab complete NATEF task sheets for ch52.

Quiz/Test

- **Ch. 52. Test**
- **Ch. 53. Pretest due Thursday 3/29/18 at 6:00pm**

Thursday: 3/29/18 we will meet in classroom #3, lecture on chapter 53. Over the weekend print your NATEF task sheets and be ready to complete task sheets on Tuesday 4/3/18 in lab.

Read / Homework:

- K53001 – Describe battery types and construction.
- K53002 – Explain battery sizing, configurations, and ratings.
- K53003 – Describe lead/acid batteries' charging and discharging process.
- S53001 – Perform battery-related service.
- S53002 – Perform battery tests while maintaining memory.
- Ch. 53 Anatomy of a Car
- Ch. 53. Resources
- Ch. 53. Media Gallery

WEEK 8 April 2 – 8 (followed by Spring Break Week)

Tuesday: 4/3/18 we will meet in lab complete NATEF task sheets for ch53.

Thursday: 4/5/18 we will meet in classroom #3, lecture on chapter 53. Chapter review and reinforcement lecture based on student test scores and lab proficiencies. Over the weekend print your NATEF task sheets and be ready to complete task sheets on Tuesday 4/17/18 in lab.

WEEK 9 April 16 – 22

Tuesday: 4/17/18 we will meet in lab complete NATEF task sheets for ch53.

Quiz/Test:

- Ch. 53. Test
- Ch. 54. Pretest due before Thursday 4/19/18

Thursday: 4/19/18 we will meet in classroom #3, lecture on chapter 54. Over the weekend print your NATEF task sheets and be ready to complete task sheets on Tuesday 4/26/18 in lab.

Read / Homework:

- K54001 – Describe the purpose, operation, and types of starter systems.
- K54002 – Explain the function of starter motor components.
- K54003 – Explain the operation of the starter solenoid and control circuit.
- S54001 – Perform starting system inspections.
- K54004 – Describe the purpose and function of the charging system.

- K54005 – Explain the purpose and function of alternator components.
- K54006 – Explain rectification and the operation of the rectifier.
- K54007 – Explain the process of controlling charging system output.
- S54002 – Perform charging system inspections.
- Ch. 54 Anatomy of a Car
- Ch. 54. Resources
- Ch. 54. Media Gallery

WEEK 10 April 23 – 29

Tuesday: 4/24/18 we will meet in lab complete NATEF task sheets for ch54.

Thursday: 4/30/18 we will meet in classroom #3, lecture on chapter 54. Chapter review and reinforcement lecture based on student test scores and lab proficiencies. Over the weekend print your NATEF task sheets and be ready to complete task sheets on Tuesday 5/1/18 in lab.

WEEK 11 April 30 – May 6

Tuesday: 4/31/18 we will meet in lab complete NATEF task sheets for ch54.

Quiz/Test:

- Ch. 54. Test
- Ch. 55. Pretest due before Thursday 4/19/18

Thursday: 5/3/18 we will meet in classroom #3, lecture on chapter 55. Over the weekend print your NATEF task sheets and be ready to complete task sheets on Tuesday 5/6/18 in lab.

Read / Homework:

- K55001 – Describe the function of the lighting systems and types of lightbulbs.
- K55002 – Explain the purpose of each of the convenience and safety light systems.
- K55003 – Explain the purpose of each of the driver's intention indicator light systems.
- K55004 – Explain the function of common headlight systems.
- K55005 – Describe electronically controlled lighting systems.
- S55001 – Perform lighting system inspection, testing, and service.

- Ch. 55 Anatomy of a Car
- Ch. 55. Resources
- Ch. 55. Media Gallery
- Ch. 55. Test

WEEK 12 May 7 – 13

Tuesday: 5/8/18 we will meet in lab complete NATEF task sheets for ch55.

Thursday: 5/10/18 we will meet in classroom #3, lecture on chapter 55. Chapter review and reinforcement lecture based on student test scores and lab proficiencies. Over the weekend print your NATEF task sheets and be ready to complete task sheets on Tuesday 5/15/18 in lab.

WEEK 13 May 14 – 20

We are going to use the skills we have built up the last 12 weeks to double down on the last two chapters and buy some breathing room before FINALS.

Tuesday: 5/15/18 we will meet in lab complete NATEF task sheets for ch55.

Quiz/Test:

- **Ch. 55. Test**
- **Ch. 56. And 57. Pretest due before Thursday 5/16/18**

Thursday: 5/16/18 we will meet in classroom #3, lecture on chapter 56. AND 57. Over the weekend print your NATEF task sheets and be ready to complete task sheets on Tuesday 5/16/18 in lab.

Read / Homework:

- K56001 – Explain the purpose, function, and types of vehicle networks.
- S56001 – Diagnose CAN bus network faults.
- K56004 – Explain the purpose and types of DC accessory motors.
- S56003 – Diagnose horn systems failure.
- S56004 – Diagnose faults in the power door lock systems.
- S56005 – Diagnose faults in the wiper/washer systems.
- S56006 – Diagnose faults in heated accessory circuits.

- Ch. 56. Resources
- Ch. 56. Media Gallery

Chapter 57.

- K57001 – Describe the purpose, function, and types of cruise control systems.
- K57002 – Describe the purpose and function of various collision avoidance systems.
- K57003 – Explain the purpose, function, and operation of supplemental restraint systems and components.
- K57004 – Describe the types of components and the features that make up the entertainment system.
- K57006 – Describe the purpose and function of mobile Global Positioning Systems.
- K57007 – Describe the types and function of vehicle antitheft systems.
- Ch. 57. Resources
- Ch. 57. Media Gallery

WEEK 14 May 21 – 27

Tuesday: 5/22/18 we will meet in lab complete NATEF task sheets for ch56 AND 57.

Thursday: 5/24/18 we will meet in classroom #3, lecture on chapter 56.AND 57 Chapter review and reinforcement lecture based on student test scores and lab proficiencies. Over the weekend print your NATEF task sheets and be ready to complete task sheets on Tuesday 5/29/18 in lab.

WEEK 15 May 29 – June 3 (NOTE: Monday, May 28 is a holiday)

Tuesday: 5/29/18 we will meet in lab complete any outstanding NATEF task sheets.

Quiz/Test:

- Ch. 56.
- 57. Test

Thursday: 6/31/18 hands on final exam and student ASE testing

WEEK 16 June 4 – 9 (LAST DAY OF TERM IS SATURDAY JUNE 9TH)

Tuesday: 6/5/18 hands on final exam and student ASE testing

Thursday: 6/7/18 hands on final exam and student ASE testing.

POLICY on PLAGIARISM and ACADEMIC INTEGRITY: *You can link to the VVC Student Handbook. Please note that instructors cannot fail a student for the course for plagiarism (unless the assignment plagiarized is worth enough points that the student will naturally fail the course). Sample language is 'All students in this course are expected to complete their own work. Students who cheat or plagiarize will earn zero points for that assignment.'*

LATE WORK POLICY: late work will not be accepted the deadlines are clear and spaced far apart.

FREQUENCY OF CONTACT FROM INSTRUCTOR: *I will check your progress in blackboard twice a day minimum once in the morning and once in the evening. Please check blackboard every day for announcements.*

When can students expect a response to messages?

Text messages will be answered as soon as they are received. I work night and keep very long odd hours if it can't wait and you're worried I'm asleep, send it. Emails will be accessed the same as blackboard; on that note please email from outside BB as there is no mechanism in blackboard to notify me of your message.

What is the grading turn-around time? For online work as fast as the angry electrons in your internet router can dance. For labs and paper assignments that are turned in on time; I grade once a week. Late work gets graded last.

AUTHORITY of the INSTRUCTOR: According to Education Code Section 76032, faculty members have the authority to manage their classes and classrooms and to maintain an acceptable level of conduct within each class. Faculty may suspend students from class for up to two consecutive class meetings for misconduct which disrupts the class. Students suspended from class may not return to class during the time they are suspended unless permission to return is granted by the instructor. Instructors must complete an incident report on all suspensions and transmit the form to the appropriate administrator.

STUDENT RESOURCES: Most information regarding resources available to students can be found by visiting the Student Services portion of the VVC website.

ADDITIONAL INFORMATION:

- Policy on extra credit? Hard work pays off keep the shop clean and your hands dirty. I will also hide items in documents like these. Pico lab scope software for example, costs how much from the manufacture?
- Policy on electronic devices, food/drink in the classroom? See Victor valley college automotive policies and procedures.