College of the Redwoods
Automotive Technology Advisory Committee
Minutes

May 17, 2022

Meeting called to order at 6:13pm.

Introductions of those in attendance:

Anibal Florez, CR instructor.

Ernest Shull, CR instructor.

Morgan Solem, CR grants manager.

Mike Haley, CR interim Career Education Dean.

John Miller, CR graduate and employed at State Parks.

John Neely, service manager at Lithia.

David Peterson, shop foreman at Leons' car care center.

Action items: Approve the minutes from the previous meeting. Moved to approve by John Miller and seconded by John Neely.

Discussion items:

- *Updates and changes to certificates and degree* – Anibal updated the committee on the catalog descriptions that will go into the next academic year's catalog that best details how the certificates are stackable towards the associate's degree.

Comments:

Anibal described how the new AT-10 introduction to automotive technology course was not applicable to those students who have automotive experience and the reasoning behind making AT-10 an elective from a list of electives available to those students who do not need the introductory curriculum. These students have the option to take worthwhile courses from other departments to satisfy the required units.

John Miller shared that it sounded like a lot of classes. Anibal responded by saying that overall it is still a 10 course program as it stands today. Barring the HEV course under development.

Ernest and Mike suggested that based on the needs of the students that scheduling would try to best accommodate those who cannot make the traditional schedule of classes we currently offer. It may be Friday only class or perhaps even a set of weekends or even a summer course.

- *HEV/EV curriculum* – John Neely asked if the program was equipped to start running the HEV course. Anibal shared that the program is currently developing the curriculum, trainers, tools, and vehicles for that course.

Comments:

Mike asked John N. how much HEV and EV work has been coming into the shop, to which John replied more and more EV and the shop is already seeing a lot of Hybrid vehicles rolling in for service. And that the EV and HEV work load is increasing more and more.

Mike followed up with an additional question regarding diagnosis and repair of these vehicles as opposed to just parts replacement, saying do you (John) think that will change? More diagnosis of EV and HEV vehicles happening at the shop level? John replied that it is hard to say. But he assured that it was not going to get less complicated. John also shared that the amount of people who can properly do electrical diagnosis is getting so small and simultaneously shop rates are increasing at a rate that future diagnosticians will be paid very well. John emphasized that electrical diagnosis is very important now and into the future.

- *HEV course under development*: Trainers for EV and HEV technology have been purchased and are slated to be delivered this summer time. One of the two trainers focuses on the simulation of multiple types of HEVs and their drivetrain and power distribution set up. It includes embedded fault recognition and diagnosis of those faults.

The second trainer is focused on high voltage battery maintenance, balancing, and diagnosis.

The trainers are meant to function as a safe stepping stone towards a live vehicle for the students to work on after the theory has been discussed in the lecture room.

Part of our ASE accreditation stipulates that the instructors be ASE certified in the automotive system areas that we teach. This means that Ernest and I will need to pursue our L3 ASE certifications. Before attempting the test we plan to attend more training this semester.

The HEV course has been written and is going through the curriculum process and it looks like it will be offered in the fall on the 2023 calendar year.

Comments:

There was a discussion around keeping the total units required for the advanced automotive certificate at or below 40 units. John Miller suggested looking for areas within the program that could be compressed to allow for the additional HEV course to the program. John M. mentioned AT-22 and compressing AT-22 and AT-16 into one 12 volt system course. Which happens to be what Ernest and I are currently exploring. We are also looking at compressing AT-28 and AT-24 which John M. also mentioned.

Currently it looks like AT-28 will be compressed into AT-24 so that the program can accommodate AT-35 without going above 40 units.

John M. brought up his concerns over the safety aspect of students enrolling into and taking a high voltage systems course without any prerequisites or safety testing. He also mentioned what it would look like for industry folks looking to update their skills and what would they have to do to enroll in the AT-35 course.

To this end many things were mentioned. Safety tests, having completed AT-16 successfully, having ASE certifications, having advance industry experience or training were some of the avenues mentioned and are worth considering so that the program can accommodate the various types of students and base knowledge coming into the AT-35 course.

John N. (I think) asked about shaping the next generation of shop employees and how we can better prepare them for the real thing once they leave the program.

Internships, job shadowing, and even part time work was mentioned and is worth exploring. John N. made a good point about creating real world foundational experiences so that all the theory and lab work will land and stick in the minds of the students preparing to do this work.

John M. mentioned how instrumental it was to have shop job while going to CR to enforce and apply what he was learning in the program. He realizes that's not possible for everyone but he illustrated what a positive impact it had on his career as a technician.

David Peterson shared that being a "professional" technician is more than the knowledge base. Mike H. then asked for clarification from David asking – do you mean their interaction with coworkers or customers…? To which David said yes! All of it and more listing professional technician traits like: keeping work area clean, tools organized, speaking and dressing well, working well with others, being able to communicate with customers, plus all the obvious stuff like showing up on time and staying busy. Professional ethic is big.

David mentioned that part of the problem may be the perception of a mechanic as a dirty and uneducated person who could not find better work. This has not been the case to many years but it lingers on.

In-house internship- Ernest mentioned an idea that speaks to the lack of shop exposure while in the program stating that, students in the program can be assigned a task or time to be completed while shadowing the maintenance technician here on campus.

- *HEV specific tools*- Anibal asked the committee if they had any input on HEV/EV tools that they could not live without that we should consider. Anibal mentioned the R1234YF refrigerant machine that is necessary for high voltage systems to start.

Comments:

The committee mentioned Scan tools and access to service information are key. At the dealership level they have special tools supplied by the manufacturer and they are varied and numerous.

- *Questions from the VPI –*

1- *How is the program responding to industry needs? Are we (CR) relevant?* David's reply was absolutely relevant. There is already a technician shortage in general not to mention high

voltage trained techs. John M. seconded that and wished that CR had more graduates on a regular basis.

As a side note Morgan asked if the UTI graduates applying locally were from the area, noting that exposure to our local and much more affordable program may be an issue. John M. noted that awareness that our program exists has always been an issue. Including exposure presence at local job fairs. Dual enrollment was also brought up as a possible avenue to encourage outreach to local high schools.

2- *What needs to exist that CR' AT is not addressing?* HEV/EV class that is not currently offered is what John M. suggested. One that is accessible to anyone with the prior knowledge, experience, or prerequisites.

3- *What is CR doing within the AT program that it should not be doing?* (if anything) nothing mentioned.

- *ASE accreditation self-evaluation* – Anibal informed the committee about the ASE requirement that the program's advisory committee conduct a self-evaluation of the program against ASE standards. Anibal mentioned that the AT program will be reaching out to the committee members for volunteers to carry out the self-evaluation sometime this summer.

Mention to adjourn by John M. and seconded by John Neely.

Meeting adjourned at approximately 7:45pm