Automotive Program
DEPARTMENT & PROGRAM REVIEW (2023/24)

Section 1: Report on Previous Goals & Requests

Please limit your response to 250 or fewer words.

The previous APR goals are as follows and associated progress:

1. Electrification course development
    a. We have done a soft overhaul of the majority of the curriculum including AUT 101, 102, 103, 104, 205, 206, 111, 280, 281.
2. Artificial Intelligence {New}
    a. Purchased three state-of-the-art electric vehicles include self-driving features.
3. Standardizations in Safety in Hybrid / Electric transportation
    a. Following the retirement of the prior program director, Ken Mays, Ken acquired an NSF grant to further their work on standardization of maintenance practices on hybrid and electric vehicles.
4. Produced new student populations through enhanced digital marketing techniques
    a. Completed a webpage redesign including the production of new marketing videos.

The previous APR requests are as follows:

1. Find a new home for the automotive program in Redmond to centralize training to one facility.
    a. This has not been completed, but is still a work in progress and a high priority. The program has moved additional class offerings to RTEC in order to more fully utilize that space.
2. Recruitment of new instructor in wake of the retirement of the existing instructor pool.
    a. Currently have two, new FT tenure track faculty and one adjunct position as well as a small cadre of new PT faculty.
3. Have access to ample capital to support growth and enhancement of program including new lab equipment and up-dated vehicles.

a. Through numerous grants, we have been able to purchase new vehicles. Purchasing of new lifts is currently being accomplished through the general funds.

4. Acquire newer model, student lab vehicles, with a focus on hybrid/electric vehicles.

    a. Accomplished through grant purchasing of three up to date electric vehicles.

We have made an intentional and substantial shift away from the goals of the previous APR. Last year we implemented a new textbook. The previous version was originally published over twenty years ago. Thus, it was terribly out-of-date given the rate at which automotive technology is accelerating. The new textbook also had a digital version with Canvas LTI integration. Meaning, the textbook could upload to Canvas. The new textbook also has live videos embedded, live animations and well as an integrated textbook reader (in multiple languages). Since the new textbook could be accessed directly in Canvas with the above listed ADA features, it made the information much more accessible to students in the way they wanted it, digital.

The next improvement was making lectures more interactive. We used the animations in the new textbook combined with real world tactile visual aids. This approach kept the student's hands more engaged, thus, keeping the mind more engaged. The tactile aids also really went over well with our population that suffers ADD/ADHD. It gave them something to focus on where they could engage all of their five senses.

Finally, we started working on a lot more customer cars in the class lab, instead of pre-determined exercises. Having live work is a lot more variable and involves many more facets of the automotive repair business than just exercises. Such as part procurement, keeping in mind availability, price and quality. Customer communication about the diagnosis and repair and realistic time table for completing the work. The students were also much more invested in their work knowing it was a real customer with real needs.

Section 2: Fulfilling Your Mission

Please limit your response to 500 or fewer words.

Automotive Mission Statement:

The Automotive Technology program emphasizes educating students as multi-skilled workers with the ability to complete a wide variety of tasks within the automotive technology service and repair setting. The program has a strong emphasis on developing basic diagnostic and repair skills that address application and safety. The program addresses the reality of the automotive industry by allowing for multiple exit points along the path to a 2-year degree.

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- *Key events, activities, or community outreach*
  We started an internship program for our automotive students with 12 local dealers and repair shops. Visited each repair shop individually and talked with the owner or service manager. Locating these folks and scheduling with them individually was time consuming. We started by getting input from local repair facilities and COCC students. We then designed an internship schedule and program that provided maximum benefit to all parties involved. The internship document went through several iterations and edits with other faculty and administration. The broad strokes of the internship are as follows. The students will work somewhere between 12 and 30 hours per week. They will have a designated mentor while at the shop. They will be regular paid employee's so they are provided uniforms, insurance and paid around $22/hour. In addition, after a successful 90-day evaluation the shop will pay for the students next term of tuition. Also, the shop will contribute $225/month into escrow for the student for tools. Upon completion of the 2-year internship the shop will use the money from escrow to purchase, a deeply discounted Snap-On brand tool kit and tool box from the COCC bookstore. There are a multitude of reason to endure the difficulty of getting the bookstore set up with a national tool vendor, even though there was lots of red-tape and many hours spent navigating through the logistics with the bookstore and the vendor. When the tool kits are purchased, it will be tax deductible for the business. Also, if the students wish to purchase them outright, they can use any funding stream that is available to them through the bookstore including scholarships, grants, veterans' affairs, and financial aid.

- *Staffing, budgeting, services, and scheduling (e.g., branch campuses, course modalities)*
  - Expanded staffing to include a new adjunct position.
  - The overwhelming majority of our student population are working adults, with adult commitments to contend with. Our student population told us very clearly that a class schedule and consistency were a major barrier to higher education for them. We also

talked with our internship sites to see what would work for their work flow as well. As a result, we were able to reformat our class offerings so that all of our courses (barring 2) are offered Monday-Thursday from 7:45am to 12:30pm. This allows our students to go to their internship site in the afternoon Monday-Thursday and for a full day on Friday and Saturday. This gives our students the opportunity to work around 24 hours per week or the ability to handle other obligations while attending our program.

- *Changes since your last APR/DPR (albeit internal, external, regulatory or other influences)*
  Complete instructor replacement other than one PT faculty member.

- *How your mission connects to or resonates with the current strategic plan and College mission*
  The Automotive Technology program connects to the current strategic plan and college mission by graduating students that can compete for a wide variety of automotive positions. The program fulfills this mission through the creation of schedules that meet students where there are. Providing internships that engage the local community. As well as providing high-quality education by creating digital access to textbook material as well as having textbook material available in multiple languages.

Section 3: College Goals and Initiatives

Please limit your response to 500 or fewer words.

The following are a three of the college values that the COCC automotive program specifically address.

- Empowering Students: We create an environment that honors students' strengths, addre sses their individual needs and helps them achieve their goals.
  - This is accomplished by three different means of teaching them knowledge, skills and professional behavior.
- Engaging our Communities: We dedicate ourselves to the vitality of our communities thr ough meaningful, impactful and accessible programs, partnerships and services.
  - In addition to serving students on both the Bend and the Redmond campuses, the program provides courses for COIC, J Bar J and Warm Springs communities. Additionally, we recruited an all new and very diverse advisory board. Our new board consists of independent shops, dealerships, manufactures, education organizations, industry representatives and aftermarket suppliers. In total the new advisory board has approximately 14 represented entities.
- Championing Diversity, Equity, Inclusion, and Belonging: We celebrate different cultures, values and viewpoints and commit ourselves to creating a college that proactively addres ses systemic injustice and strives for equity, opportunity, and access.
  - Reference Section 4.

The following are examples of one of the many initiatives that the automotive program has undertaken in recent years:

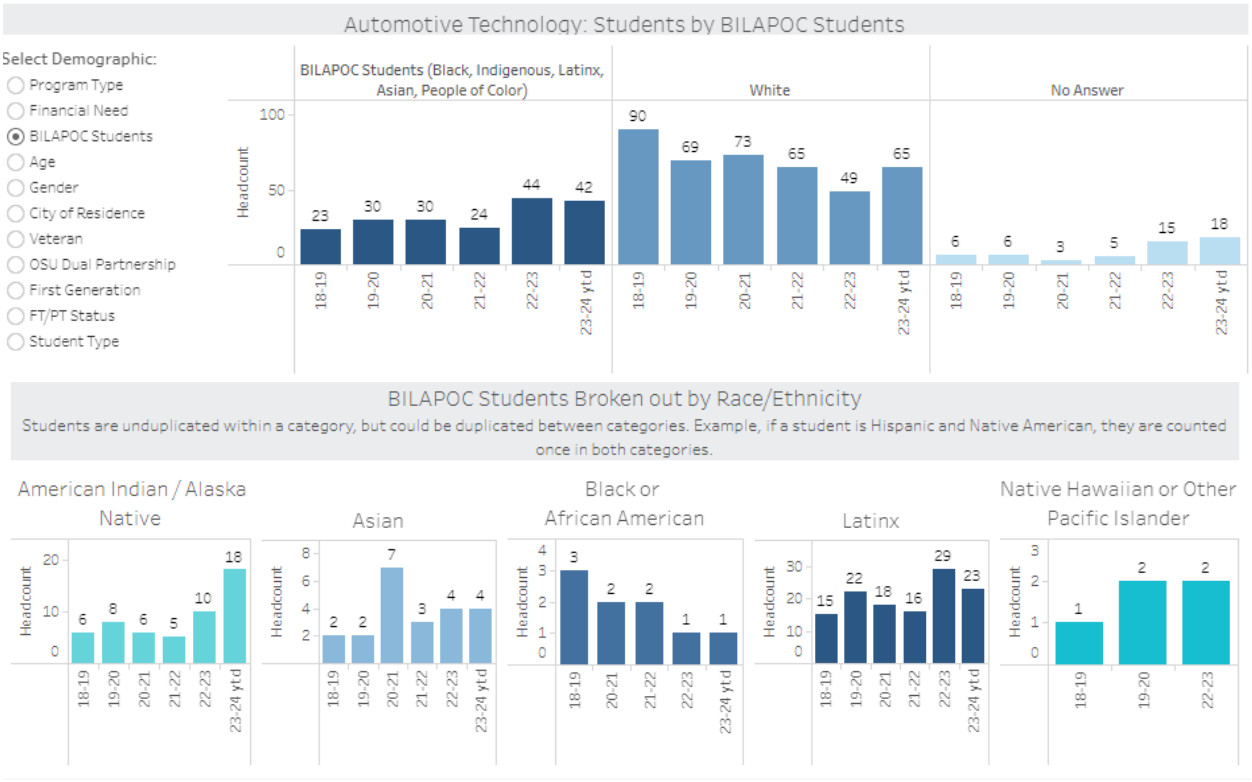
- Utilized the Future Ready Oregon Grant to procure a used Tesla model 3 to add to our EV fleet.
- In collaboration with campus services, we acquired a grant from Pacific Power to procure two new Chevy Bolt EV's to add to our fleet of hybrids and EV's that are used for class as well as by the rest of college for transportation needs.

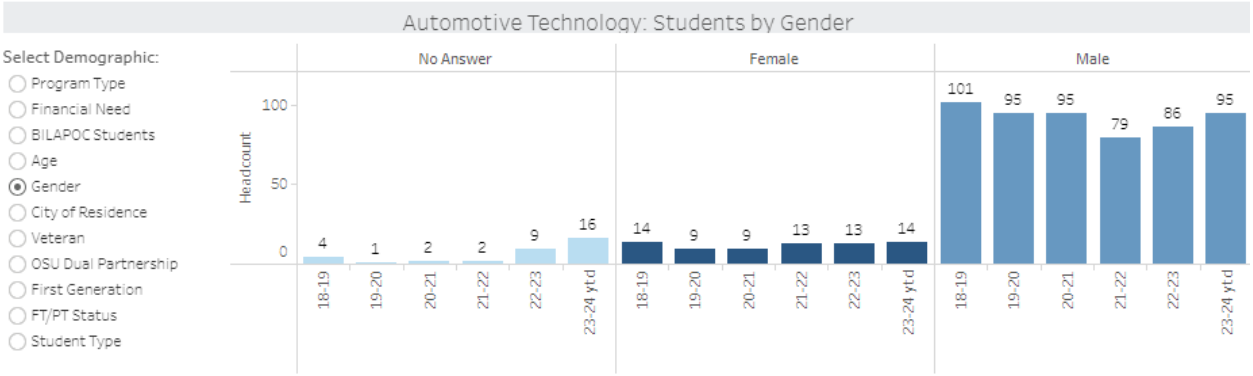
Section 4: Diversity and Inclusion Insights

Please limit your response to 500 or fewer words.

When you review Institutional Effectiveness data for this report, note that many dashboards include the ability to filter data by location, race or ethnicity, gender, Pell eligibility, veteran status, and other options. At COCC, we honor individual strengths and needs, celebrate different cultures and viewpoints, and strive for equity that addresses systemic injustices. As you review data that illustrates this rich diversity, what insights have you gained about your students and how you might help them achieve their goals? What are your area's strengths in terms of student equity? Challenges? How might your faculty learn more about any equity gaps represented in the data?

Use data to support your narrative. Note that the most compelling responses will combine qualitative and quantitative data. For quantitative data, consult Institutional Effectiveness's Dashboard Index and the Discipline FAQ. Work with your dean if you have questions about support.





The Automotive Program has a very diverse student population consisting of 34% BILAPOC students. We are most diverse in Native American (14%) and Latinx students (18%). Enrollment of Native American students has nearly doubled in the past two years. This increase in diversity is at least partially due to offering classes on the reservation in partnership with the Warm Springs Tribe and 509J school district. One of the main hurtles we identified for Warm Springs and Native Americans as population was the travel distance to higher education. The distance was both an economic barrier as well as time needed to travel. When the opportunity cost of travel time is factored in, rural communities, like Warm Springs are effectively priced out of the market.

The shift in schedule is likely most responsible for the increase since the 21/22 academic year in the Latinx student population. In many Latinx cultures young men are expected to contribute to household income in addition to their parents and siblings. At a bare minimum they are expected to take care of themselves. This is the opposite of the current main stream American culture where parents financially support their children well into their late 20's and early 30's and beyond. The schedule change to all morning classes Monday thru Thursday gives Latinx students about 24 hours/week to work and contribute to their family's household income. Additionally, our paid internship program with local repair facilities, make it more economically viable to enter a 2-year higher education program. Further evidence that our schedule change and internship program is effective is the rise in the number of Pell Grant students than in previous years. We have made it more economically viable for economically challenged students to participate in higher education.

Enrollment of first-generation students continues to increase with this past year's increase of 38.4%. This increase may be at least partially due to more students answering this particular survey question. Female vs. male enrollment comparison holds steady. The lack of an increase in the female student enrollment may be due to no longer having access to a female, automotive recruiter.

The automotive program data also shows unique age demographics compared to the COCC student population with 55% of the auto students being 19 years old and under compared to 33% for the college overall.

Section 5: Strengths and Accomplishments

Please limit your response to 500 or fewer words.

Briefly share your department's strengths and major accomplishments, noting that this should not be an exhaustive list, but rather the most important or significant accomplishments your program has achieved since the last APR/DPR.

One of our major accomplishments is bringing the COCC automotive program into the 21st century. Part of this was moving all classes on to Canvas as well as hosting materials and documents in a central location on the COCC N: drive. Also, a major revamping of the electrical classes to remove technology that is no longer common in automotive to make room for emerging technologies such as Advanced Driver Awareness Systems and autonomous/semi-autonomous driving vehicles. As the Automotive Faculty, we will also help push our electric and hybrid classes into the new world of sustainable energy vehicles. This, combined with our new digital textbook and Canvas delivery methods brought COCC closer to on par with other Automotive Programs in the state.

As stated in sections above, the automotive program high school partnerships are working. These efforts are increasing program diversity in ethnicity, age as well as economically disadvantaged and at-risk students.

Additionally, as stated in previous sections, the automotive program has made substantial progress in expanding community partnerships and serving our rural communities.

Section 6: Challenges

Please limit your response to 500 words.

Briefly share your program or discipline's challenges.

As you write your response, you are not required to but may consider things like

- *Barriers, whether internal or external, that may impact the accomplishment of your mission*
- *Opportunities for improvement or development*

Use data to support your narrative. For quantitative data, consult Institutional Effectiveness's Dashboard Index and the Discipline FAQ.

The Automotive program is facing several major barriers, not only to academic excellence, but also to growth and expansion.

1. Faculty- It is nearly impossible to recruit top quality faculty, both part time and full time and for a host of different reasons. A major hurdle for both part time and full-time faculty recruitment is compensation. In the current market, knowledgeable, experienced, competent technicians are highly sought after and therefore, highly compensated at $75,000-$130,000 (Indeed.com). It is a tough sell to ask someone in their prime to give up the high wages that they have worked to achieve. And to ask them to give it up for a compensation package that is not even in the ball park of where they are now is an even tougher sell. This problem is further compounded by the high cost of living in Deschutes County. The current median home price in Deschutes County is $706,000. Asking top shelf professionals to take a massive pay cut, while concurrently asking them to pay a much higher cost of living, for most people is a non-starter. This makes recruiting from out of the area almost impossible and recruiting from in the area difficult at best.
2. Facilities-Ponderosa Hall was built in 1971 and has gone through several remodels and additions, none of which focused on automotive. We have currently outgrown the space with the number students and classes that we offer.
3. Equipment-We have three functional above-ground vehicle lifts and two in-ground drive-on alignment lifts that can be used for isolated functions only (beyond alignments). We have four

flat bays in addition to the lift bays, but the functionality of the bays without lifts is severely limited. As well as the bays are stacked double deep (meaning two bays per garage door). The students in the upper bay cannot get out to make a test drive without having the students behind them move their vehicle out of the way. With classes that range from 12 to 24 students, there simply is not enough equipment or space for students and vehicles. The building is also lacking in infrastructure, such as enough electrical power to add more above ground lifts, electrical outlets, lighting, work benches, work bench space, and exhaust management in each bay (currently only 5 bays have exhaust management, the rest require hoses to attempt to route the exhaust outside the bay door with only minor success).

4. Classroom space- Adequate classroom space on the first floor of ponderosa hall is lacking, particularly those areas that are pre-assigned to automotive. Mostly it is lacking any sort on noise suppression and is very difficult to hear or be heard while in the ponderosa classrooms. Making lecture and classroom interaction challenging at best. The technology in the Ponderosa classrooms is also very behind the times. The projector works sporadically much to the frustration and dismay of the IT department, who has made multiple attempts to fix it but to no avail.
5. RTEC lab space- We do have automotive space on the Redmond Campus RTEC building that we are trying leverage by teaching more classes there. However, there is only one lift and 5 flat bays in RTEC. While the infrastructure and technology are far better, it is still a very small space and we have to cap classes at 12 students, to account for lab space.

Section 7: New Goals

List your goals and needs here. Include no more than five goals and indicate where/how you see these goals aligning with and/or positively impacting the current strategic plan or other important initiatives.

1. Recruit more Part-time faculty.
2. Expand the footprint of our modular self-paced classes. Both in volume and further reach geographically.
3. Build out our hybrid curriculum to include the latest EV technology and ADAS (Advanced Driver Assistance Systems)
4. Find Space in Redmond to house the entire Automotive Program at or near the COCC Redmond Campus.

Section 8: Resource Needs

For each goal listed in Section 7, indicate what kind of resources, strategies, or support you need to achieve your stated objectives. The DPR Response team will review these requests and recommend the next step as appropriate in their written response.

Goal #1 recruiting more Part-time faculty.
This is going to be a tall order and one most of COCC is suffering from. To find a person that has the aptitude, expertise, experience and time in Central Oregon is a feat in itself, for that person being willing to work for as low of compensation as COCC offers is highly improbable. I need something to sweeten the pot for Part-time hires. Higher wages? Possibility of benefits? Free tuition for family members? Milage reimbursement if they teach at an outlying campus? Once we can make it reasonably attractive,

we can reach out to our Advisory Board network to search for interested parties. As well as, work with MPR to develop a digital flyer or landing page for potential candidates.

Goal #2 Expand the foot print of our modular Self-Paced classes.
We currently offer three self-paced courses at the Bend Campus. One of them, the Small Gas Engines class; we have made mobile. We have taught it at J Bar J, COIC and Warm Springs. I am looking to expand the module style offering to the other two courses of Basic Electricity and Mechanical Systems. I am hoping to achieve the Basic Electric with Perkins Funding as it requires the purchase of trainer boards. We applied to Perkins for a set of 10 of boards, five to have here in Bend and 5 to be able to go on the road. For the 3rd course of Mechanical Systems, we are in need of funding for hardware to support that class to make it mobile. Once those things are achieved, we need some load release for a person to be able to transport, advertise and administer the mobile program to both local and non-local high schools. We have talked about adding a section of the Small Gas Engines class in La-Pine, based on a conversation with Cindy Lenhart.

Goal #3 Build out our Hybrid to curriculum to include latest EV technology and ADAS (Advanced Driver Assistance Systems).
This goal will also be a heavy lift as the industry and technology is evolving more rapidly, increasing in complexity and growing in cost exponentially. First challenge will be finding training for the faculty in the latest in EV technology and ADAS. The current leader on the West Coast is professor John Kelly at Weber State University in Ogden Utah. Weber State offers a three-part series for EV and ADAS. Two of the courses being online/remote and the third course a 2-week long intensive course that is offered at the campus. The main barrier here is tuition and travel expenses. For the whole series it will cost about $5,000/person including travel expenses. For our 3 faculty to participate that will be approximately $15,000, with a budget of $486 dollars per faculty member per year it is currently way out of reach.

Goal #4 Find Space in Redmond to house the entire Automotive Program at or near the COCC Redmond Campus.
This goal will likely be a three-to-five-year process. As stated above our current space is not only too small but also inadequate. All of our hybrid and electric program is already in Redmond. The COCC Bend campus is reaching capacity for property and parking. Redmond would be more centrally located for our service district making it more convenient for students from the outer parts of our service district to access CTE. It would also let us have all of the automotive courses in a single location making continuity of education easier for students. I have begun the conversation with Administration about finding a facility. However, most of the time and energy right now is being spent on the MATC revitalization grant and finding a temporary space for MATC while their space (building #3on the Redmond campus) is being remodeled. I would like to find an existing building to remodel for a new automotive space just for the sake of time. Going through the process of finding land, contractors, design firm, permitting etc., would turn this is to a 5–7-year process.