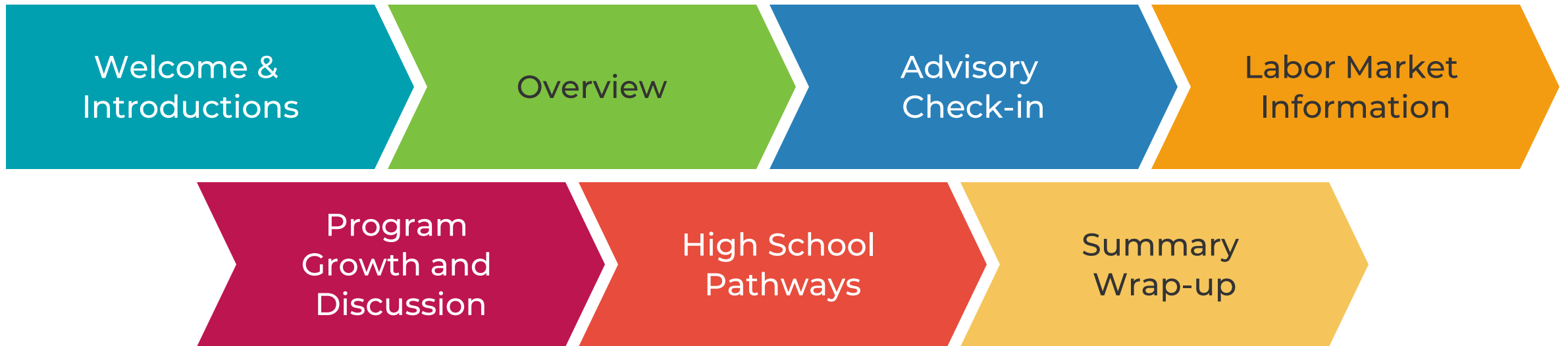




Automotive Technology Auto Collision Repair Technology

Advisory Committee Meeting
Thursday, May 11, 2023

AGENDA





Welcome!

and

Introductions

We'd like to learn a little about you...

Please share your name, organization, and what brings you to the room today.



Overview

Alina Varona

Dean of Career Education and Workforce
Development

COLLEGE OF MARIN

CAREER EDUCATION

AUTOMOTIVE PROGRAMS

Overview of Career Education and Workforce Development

Prepare students with skills for 21st century jobs, careers, and the future of work

Degrees and Certificates

- **Create Pathways & Support Momentum**

Short Term Training and Workforce Development

- **Respond In-Time to Labor Market Needs and Connect to Employment**

Non Credit Education

- **Ladder and Bridge to Basic Skills, Work, and Credit**

2.1 million students at **116** colleges

[HTTPS://WWW.CCCCO.EDU/ABOUT-US/CHANCELLORS-OFFICE/DIVISIONS/WORKFORCE-AND-ECONOMIC-DEVELOPMENT](https://www.cccco.edu/about-us/chancellors-office/divisions/workforce-and-economic-development)

Career Education: Programs

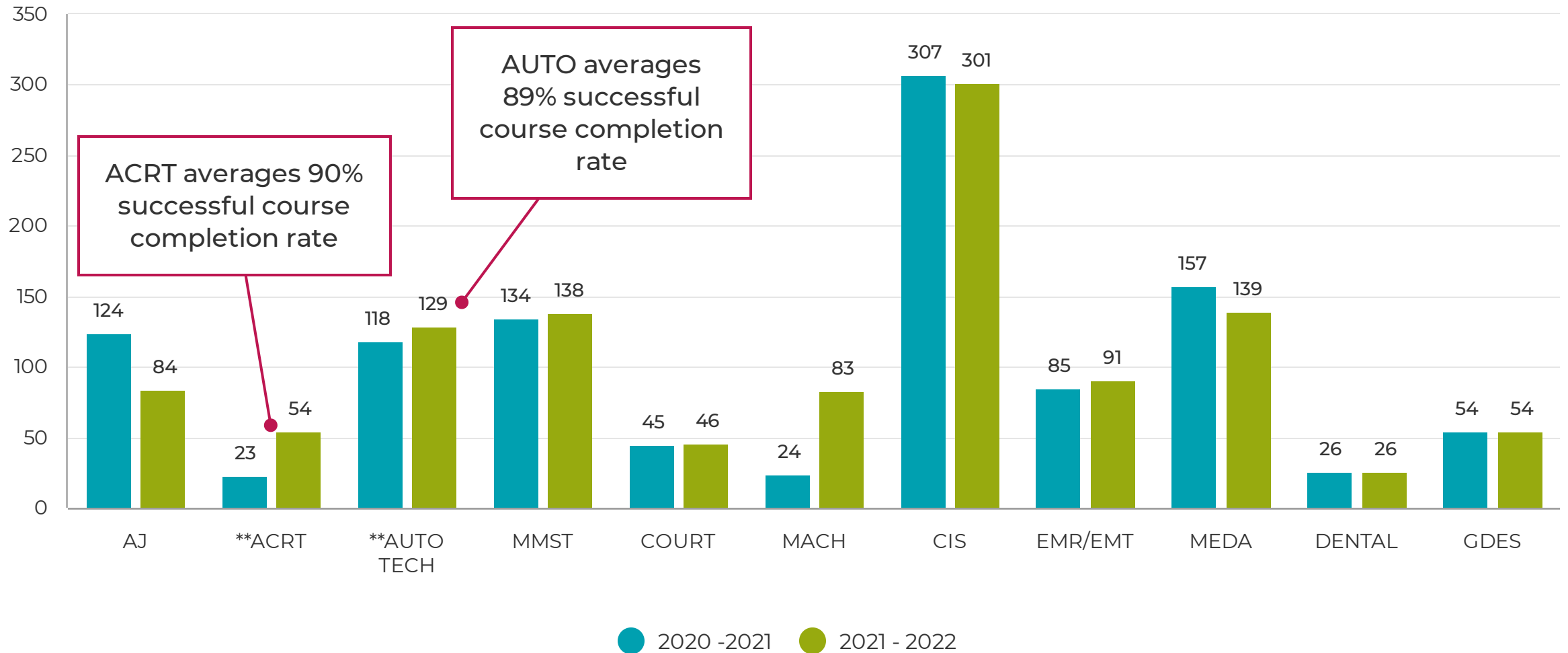
cte.marin.edu



- Administration of Justice
- Auto & Industrial
 - **Auto Collision Repair; Auto Technology; Electronics;** Machine & Metals
- Computers & Multimedia
 - Computer Information Systems; Graphic Design; 3D, Video, Game Dev; Web Design and Development; MS Office Specialist Certification
- Court Reporting
- Health Sciences
 - Dental Assisting; Emergency Medical Technician Training; Medical Assisting, Public Safety Degree; FIRE Foundry Program; CNA/CHHA
- Organic Farming
- Education to Career (E2C)
 - Construction Program
 - CNA/CHHA - coming soon
 - Bus Coach Operator Apprenticeship - coming soon
- Summer Career Academies
 - High School Academies
- Short-Term Career Training Programs (12 Weeks)
 - Business Start-Up: online selling, accounting, office applications, social media marketing

Enrollments by Program

Unduplicated headcount by program across 2 academic years

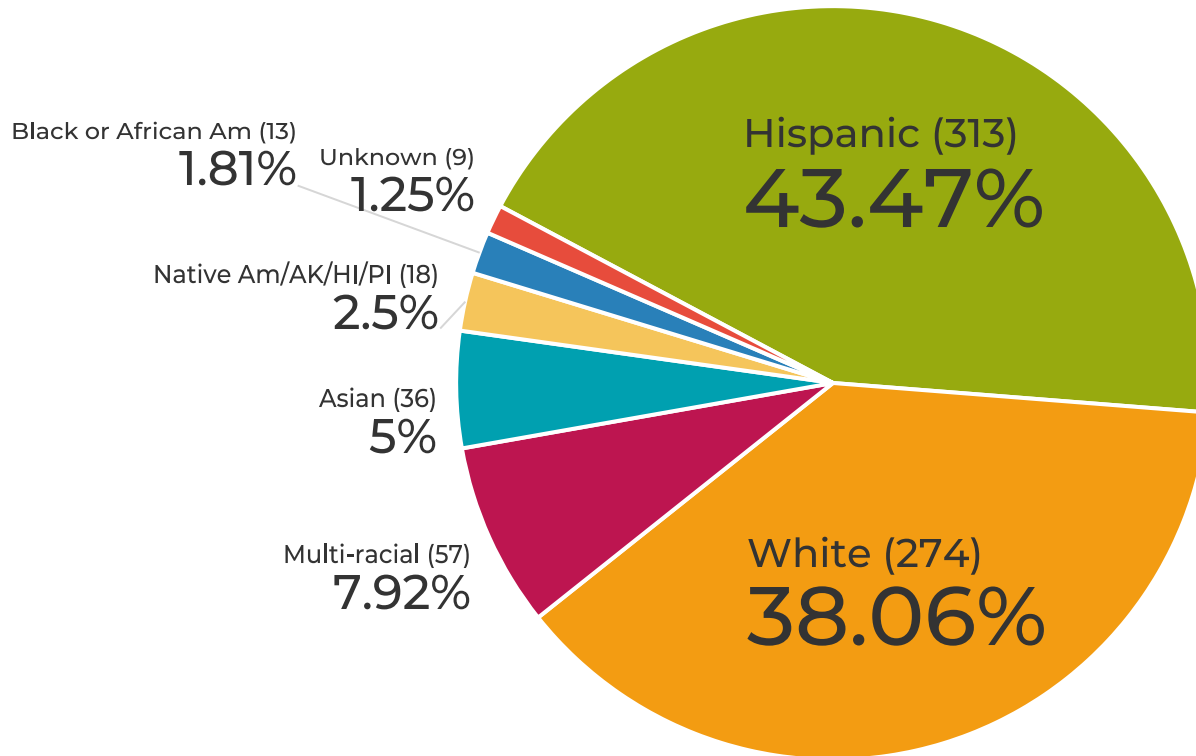


Average Student Demographics

Automotive Technology (AT)

2019 - 2022

11% Female
88% Male
1% Unknown



COLLEGE OF MARIN CREDIT STUDENT CHARACTERISTICS

Gender: Male 39% Female 60%;

Median Age: 23

Race/Ethnicity:

Asian: 487 (7%)

Black/African American: 207 (3%)

Hispanic: 1,985 (30%)

Multi-racial: 408 (6%)

Native American: 14 (0.2%)

Native Hawaiian/Pacific Islander: 13 (0.2%)

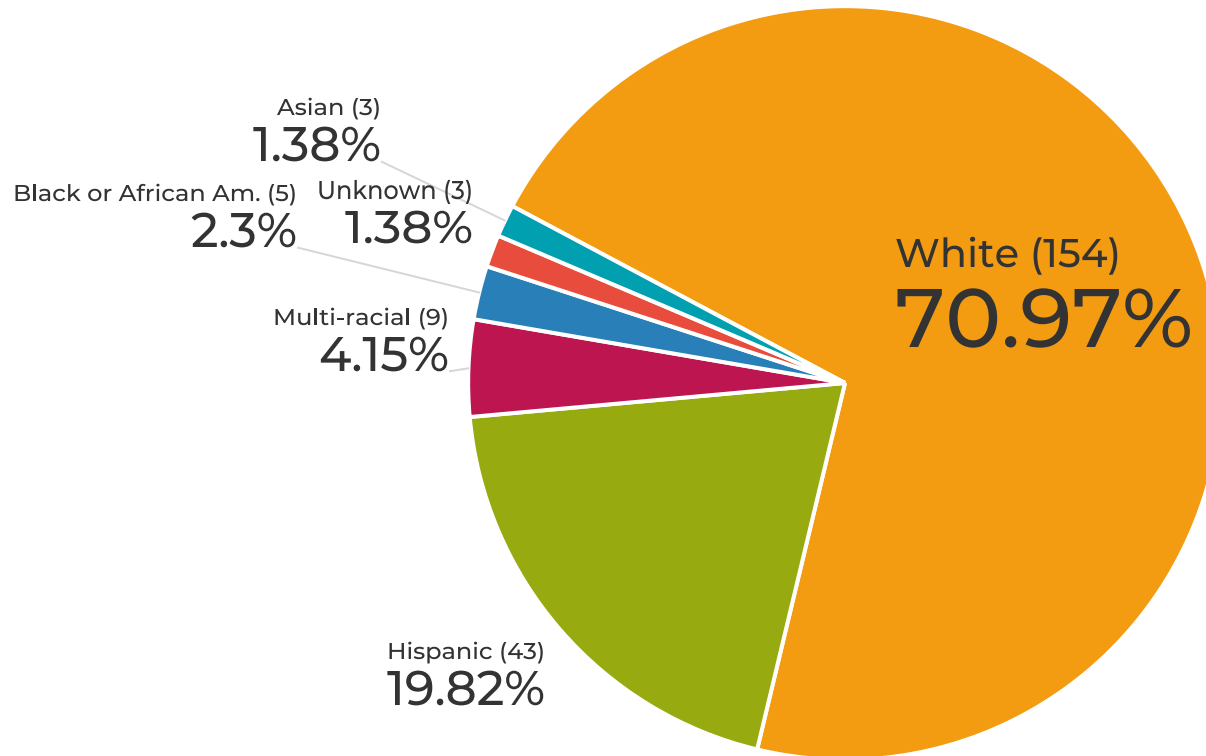
White: 3,211 (48%)

Average Student Demographics

Automotive Collision and Repair Technology (ACRT)

2019 - 2022

16% Female
81% Male
3% Unknown



COLLEGE OF MARIN CREDIT STUDENT CHARACTERISTICS

Gender: Male 39% Female 60%;
Median Age: 23
Race/Ethnicity:
Asian: 487 (7%)
Black/African American: 207 (3%)
Hispanic: 1,985 (30%)
Multi-racial: 408 (6%)
Native American: 14 (0.2%)
Native Hawaiian/Pacific Islander: 13 (0.2%)
White: 3,211 (48%)

Awards Earned

2022-2023 Academic Year

- **1** - AS Degree - Auto Technology, Master Repair Technician
- **12** - Certificates - Automotive Technology
- **3** - Certificates - ACRT - Master Collision Repair
- **16** - Awards Total



Advisory Check-in

PRIORITIES AND CURRENT LANDSCAPE

Advisory Member Share Outs & Discussion

What has this last year looked like for your field?

What should we be aware of to support our future students?

Be on the look out! Community Survey is Coming Soon!



Staffing and Recruiting

- What are your current priorities and needs for hiring?



Community Partnership & Impacts

- How should we best prepare our students to be qualified and competitive?



Other Key Items?

- Potential technology, training, or emerging sectors?



Training & Professional Development

- Are there professional development options needed for your industry?



Labor Market Information

Heather Rahman

Program Coordinator, Career Education

Regional Labor Market Information

Regional Counties:
Marin, Napa, Sonoma,
Solano, San Francisco
and San Mateo

Sources: Employment Development Division (EDD); Department of Labor
and O*Net Online

Per committee:
"upper-end" body shops
will hire new employees
at rate of \$25/hour =
\$48,000/year; \$30/hour
Apprentices; \$45 -
55/hour for Journeyman
Techs

Automotive COM Offerings	Occupation	Job Titles	Average Annual Earnings	Annual Job Openings projected through 2028
Certificate or A.S. in ACRT, Master Collision Repair	Automotive Body and Related Repairers	Auto Body Repair Tech, Auto Body Repairman, Collision Repair Tech, Refinish Tech	\$61,770	123
Certificate or A.S. degree in AUTO, Master Repair Technician	Automotive Service Technicians and Mechanics	Auto Mechanic, Automotive Drivability Tech, Auto Service Technician, Master Auto Technician, Service Tech	\$60,700	557
Certificate, Automotive Electronics Specialist*	Electronic Equipment Installers and Repairers, Motor Vehicles	Automotive Technician, Electronics Technician, Installation Technician	\$44,290	500

* CA State

<http://coeccc.net/>
<https://www.onetonline.org/>



Program Growth

Ron Palmer, Instructor and Career Education Chair

Mark Barrall, Instructor

Purchasing Request

Purchase of A/C recharge machine and R1234 machine

- capture and recycle R134a refrigerant
- no release to the atmosphere
- meet state law requirements
- requires capital outlay forms to Chancellor's Office for approval

Requires direct input from industry advisory board.

Thoughts on purchases?

Virtual Reality



College of Marin is the

first college in the United States

to develop and implement virtual reality training into their automotive program.



In partnership with Transfer VR, College of Marin has developed virtual reality lessons in Automotive, Automotive Collision Repair and Electronics.



TRANSFR VR, a virtual reality st...

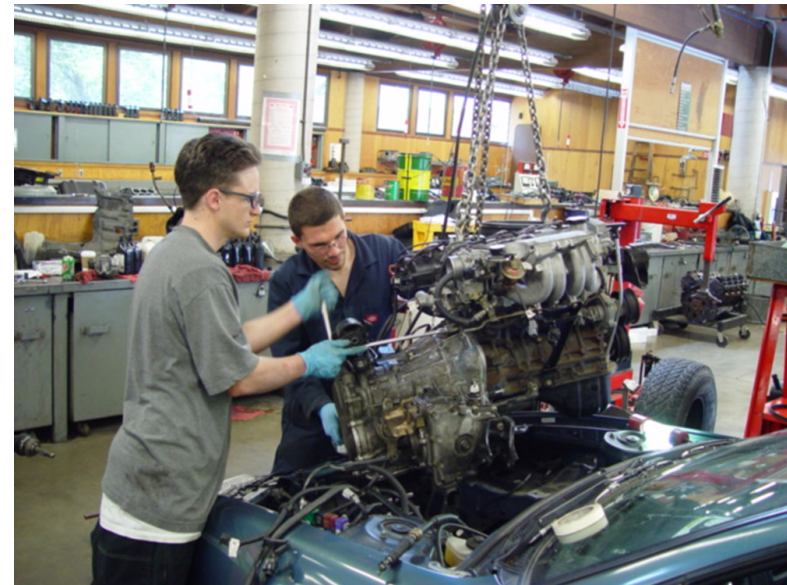
Virtual Reality is Used in Training

- Other Automotive programs are now integrating VR into their curriculum.
- Several dealerships are now using VR as a training program for new employees.
- The airline industry is using VR to replace expensive simulator time.



VR Lessons - Automotive Technology

- Intro and Controls Tutorial (Generic)
- Engine Oil Change
- Battery Safety and Service
- Starting and Charging Fundamentals
- Jacks, Jack Stands and Lift Safety
- Automotive Safety Awareness: Airbag, ABS, ADAS and HV Batteries
- Disc Brake Pad Replacement
- Drum Brake Shoe Replacement
- Suspension System Types
- Fuel System Fundamentals
- Fuel System Safety
- Engine Cylinder Compression Test
- Steering System Types



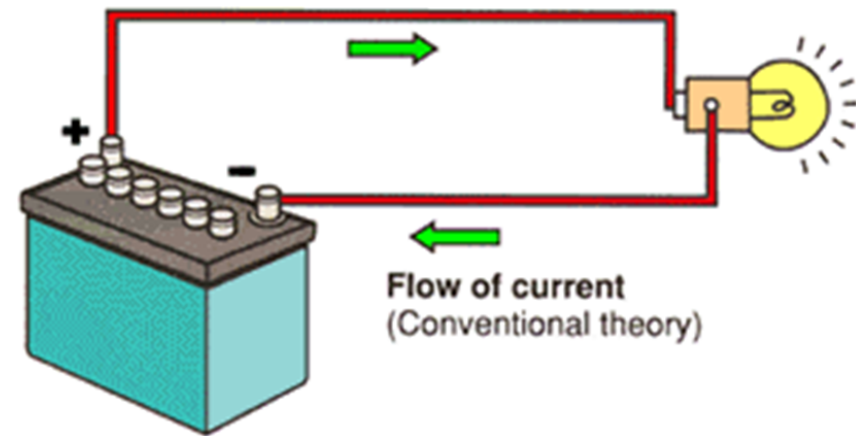
VR Lessons - Automotive Collision Repair

- Basic Auto Body Hand Tools
- Basic Auto Body Power Tools
- Priming Prep - Masking
- Priming Panels
- Primed Prep/Sand for Paint
- Paint Gun and Equipment - Inspect and Clean
- Paint Gun and Equipment - Set up and Spray Patterns
- Paint Selection and Mixing
- Basic Painting
- Basic Painting 2 - Advanced Painting
- Basic Auto Body Straighten Fundamentals - Hammer & Dolly
- Basic Auto Body Straighten Fundamentals - Weld-on Pulling
- Basic Auto Body Filler - Prep
- Basic Auto Body Filler - Application
- Basic Auto Body Filler - Sanding
- Bead Blasting
- Powder Coating



VR Lessons - Electrical

- Electrical Fundamentals and Ohms Law
- Electrical Repair – Connectors, Terminals and Splicing
- Electrical Repair – Basic Soldering
- Basic Electrical Tools – DVOM 1 Voltage
- Basic Electrical Tools – DVOM 2 Current
- Basic Electrical Tools – Test Light



Online Classes

- College of Marin AUTO/ACRT programs have developed several 100% online classes incorporating VR.
 - AUTO 111 – Auto Maintenance Fundamentals
 - ACRT 110 – Introduction to Auto Restoration
 - ACRT 108 – Estimating for Collision Repair



Hybrid Classes

College of Marin AUTO/ACRT programs have developed a variety of Hybrid courses. Hybrid classes include lectures, readings, discussions and testing online while labs are conducted in person and on site in the Trans Tech facility. Lectures are presented via Zoom where students actively participate through discussion, power points and guided practice. Lectures are recorded on Zoom so that students can review or watch them when convenient. This Hybrid method of delivery has provided more opportunities for student success and increased enrollment.

Motorsports



Motorsports is the art of building, racing and maintaining a race car.



The U.S. Department of Labor recognizes Motorsports as an Industry.



Program Description / Catalog Description

The Motorsports Technician program is designed to provide fundamental skills for an entry-level technician in a high-performance race shop. Graduates become skilled and proficient race car mechanics. The program offers a blend of hands-on and classroom training which prepares students to work in the challenging and rewarding fields of the Motorsport Industry. Students learn metal fabrication, MIG and TIG welding, engine building, custom painting, brakes, steering, and suspension. The Motorsport Technicians program teaches a combination of critical thinking skills and a hands-on approach to learning. The program is located in Novato, California, just west of Sonoma Raceway.

Justification

Many students in our Automotive program have expressed their desire to work in the Motorsports Industry. We are not creating any new courses but are developing a new Motorsport certificate. This new certificate will combine two existing courses from Automotive Technology and three courses from Auto Collision Repair Technology. The blending of these five courses will prepare students for an entry level position in the Motorsports Industry.

Requirements include successful completion of the following courses with a 2.0 or better:

AUTO 112 Automotive Engines Troubleshooting

AUTO 118 Brakes, Alignment and Suspension Systems

ACRT 106 Metal Fabrication Troubleshooting

ACRT 107 MIG Welding for Automotive Collision Repair Technology

ACRT 201 Automotive Paint - Waterborne and Clear Coat

AUTO 112

Automotive Engines Troubleshooting



AUTO 118

Brakes, Alignment and Suspension Systems



ACRT 106

Metal Fabrication Troubleshooting



ACRT 107

MIG Welding for Automotive Collision Repair Technology



ACRT 201

Automotive Paint - Waterborne and Clear Coat



Recommended Course Sequence

Fall Semester

AUTO 118 Brakes, Alignment and Suspension Systems - 6 units

ACRT 107 MIG Welding for Automotive Collision Repair Technology - 2 units

ACRT 201 Automotive Paint - Waterborne and Clear Coat - 4 units

Spring Semester

AUTO 112 Automotive Engines Troubleshooting - 6 units

ACRT 106 Metal Fabrication Troubleshooting - 2 units

Motorsports requires a great combination of critical thinking and hands-on skills.



Motorsport Program

Requires direct input from industry advisory board.

Thoughts on the new program?



High School Connections

Heather Rahman

Program Coordinator, Career Education

Building Pathways

Currently working with local high schools to bridge their classes to College of Marin

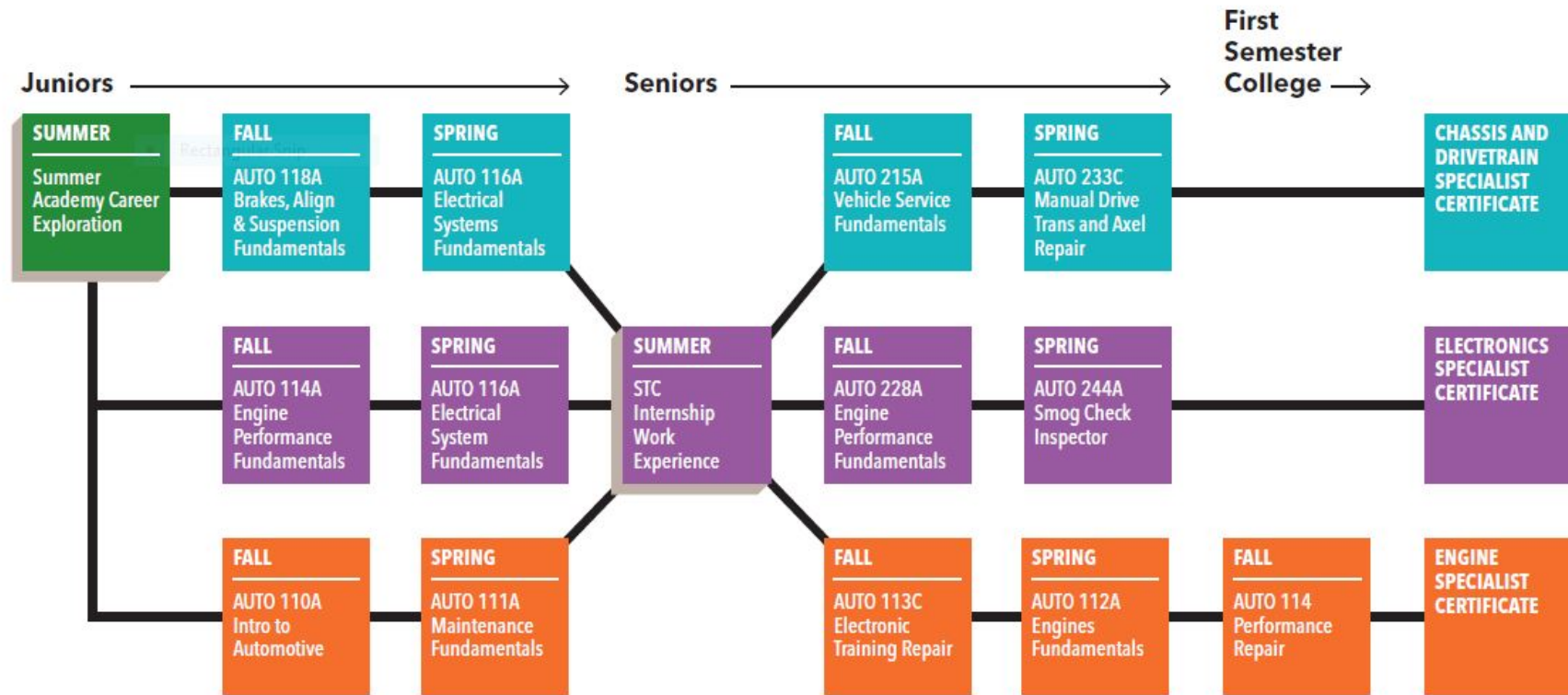
- Over 200 students currently in the Tamalpais HS Auto Course, Terra Linda ROP Auto courses, and the Car Appreciation and Preservation Program
- Looking to get each of those students signed up for Articulation by Exam credit for AUTO 110 and AUTO 111
- Working with NUSD to have about 20 students take AUTO 110 in Fall 2023
- Partnering with the County of Marin and car dealerships to offer more work-based learning opportunities for students.



Auto Technology

High School-to-College Career Pathway Map

academics.marin.edu/program/auto



To get first-hand knowledge of careers, join the Bright Futures Speaker Series at marinschools.org/Page/8304.



Earn College Units

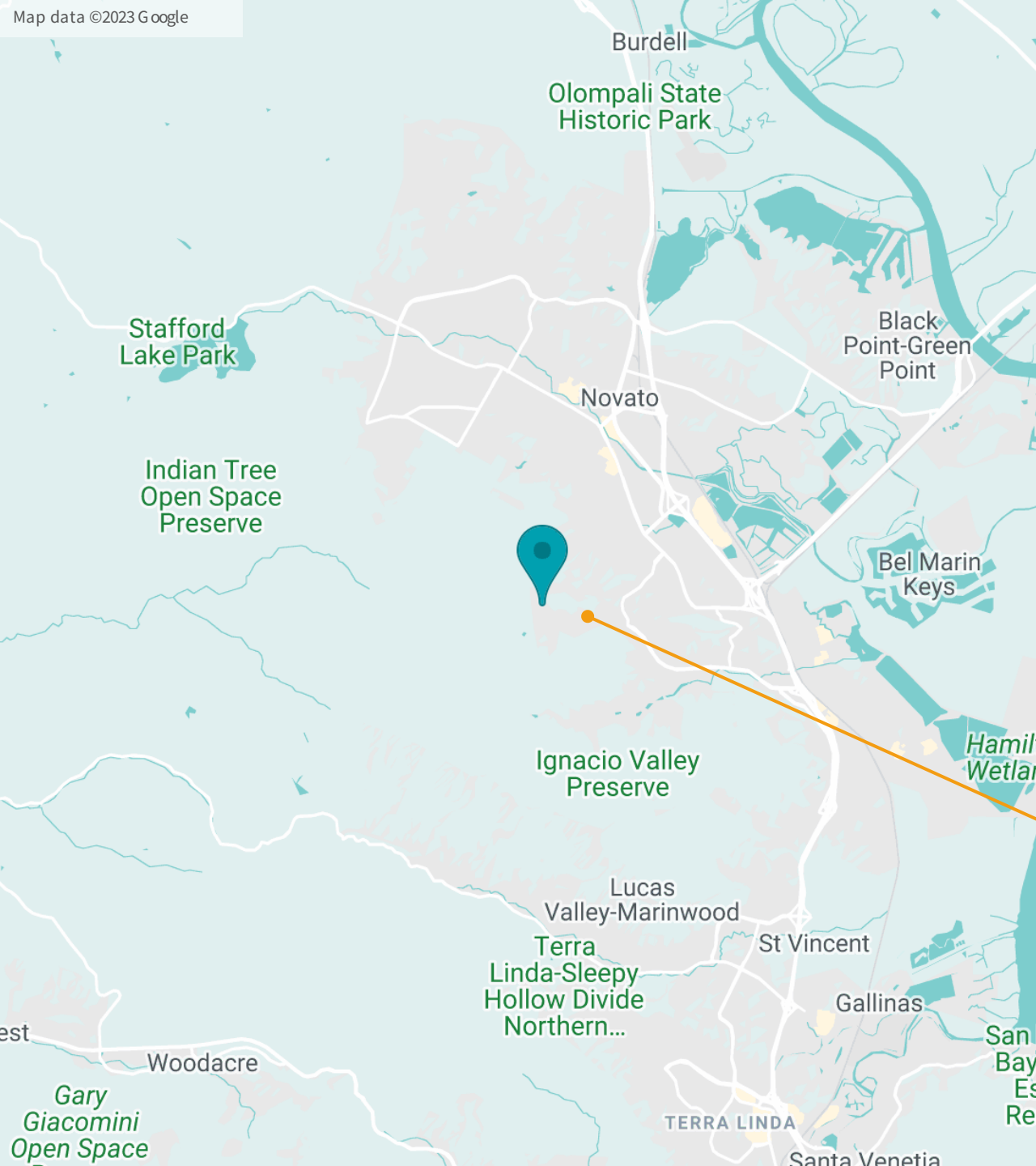
If you've come this far, you have either completed certificates in Chassis Drivetrain Specialist or Electronics Specialist. If you're on the Engine Specialist pathway, you only have one more class to go before you get to COM!



Summary/Wrap-up

Thoughts? **Questions?**

NEXT STEPS



Thank You!

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College of Marin, Indian Valley Campus