Form 1: Presentation Checklist

Name: _____   **Date**: _____

Department: _____

COCC Contact Information: _____

Use the instructions for this document to complete your presentation checklist; then e-mail your completed presentation checklist (*not* the instructions) to the Academic Affairs chair by his or her specified deadline. **Please note:** If an item listed is not relevant to your specific presentation to Academic Affairs, please mark as **N/A**. Use as many pages as necessary.

PROPOSAL OVERVIEW

TYPE OF AGENDA ITEM

☐ Information Item (requires approval of AA Chair)

☐ Action Item

    ☐ Information and committee feedback

    ☐ Procedure—revision   (Attach current procedure with proposed changes illustrated with track changes)

    ☐ Procedure—new

    Identify suggested location in *GPM*: _____

    ☐ Policy—revision (Attach current policy with proposed changes illustrated with track changes)

    ☐ Policy—new

    Identify suggested location in *GPM*:_____

    ☐ New academic program (Complete only items #1 and #2 on this form and attach stage 2 document.)

    ☐ Other:_____

BUDGET

INSTRUCTIONAL REQUIREMENTS

OPERATIONAL NEEDS, CURRENT AND FUTURE

STUDENT IMPACT

ANTICIPATED IMPLEMENTATION TIMELINE

Automotive Technology in Electronics and Diagnostics (TED)   (draft)

COCC has offered the AAS Automotive Technology in Electronics and Diagnostics (TED) as an *option* to the AAS in Automotive Management degree *since 2014*.   The National Science Foundation / Advanced Technological Education Grant # **1500573** assisted in the formation of the five advanced courses / certificates incorporated into the (TED) degree.
The intent of this proposal is to establish the AAS Automotive Technology in Electronics and Diagnostics (TED) as a degree – not an option to another degree.

This degree is an addition to our current Master Automotive Technician Certificate, with emphasis on the electrical / electronic portions of the automotive industry. Three major areas are included in this proposal: electronic and hybrid power systems, clean diesel, and on-board vehicle networking. The title places emphasis on the ever-advancing electronics that are contained on all current vehicles, clearly stating the intent of the degree. Degree seeking students are still able to take short-term certificate courses from other certificate areas and receive a degree plus short-term certificates. The accrediting body of the COCC Automotive Technology Program is NATEF (National Automotive Technicians Education Foundation). Many of the electronic competencies in certifying areas, required by NATEF, are embedded into the current A1 through A9 NATEF Certifications. With the new degree, the Automotive Program will be very effective preparing graduates for the full range of vehicle technology.

Proposed program for the 2019-2020 Catalog

Fall Term   Freshman Year

Course No.	Title	Credit
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 115	College Success for Automotive Technology	2
AUT 110	Small Gas Engines	3
AUT 101	Basic Electricity for Automotive	2
*MTH 58 or above	**Math Literacy I**	4
CIS 120	Computer Concepts	0-4
	(or Computer Competency Test)	15-19

Winter Term

Course No.	Title	
AUT 102	Auto Electric I	5
AUT 103	Auto Electric II	2
AUT 204	Steering and Suspension	3
AUT 205	Engine Performance I	2
BA 214	**Business Communication**	3
		15

Spring Term

Course No.	Title	
AUT 111	Computerized Engine Controls	5
AUT 206	Engine Performance II	2
AUT 105	Diesel Performance I	2
AUT 104	Automotive Electric III	2
AUT 202	Manual Drive Trains I	3
CIS 131	Software Applications	4
		18
Credits	**First Year**	**48-52**

Summer Term

Course No.	Title	
AUT 216A	**Co-op Work Experience	**4**
AUT 253	**Automotive Air Conditioning**	**3**

Fall Term   Sophomore Year

Course No.	Title	Credit
AUT 280	Hybrid Electric Vehicle I	4
AUT 270	Automotive Controller Systems I	4
AUT 208	Automotive Brakes	3
AUT 201	Automotive Engines	4
		15

Winter Term

Course No.	Title	
AUT 281	Hybrid Electric Vehicle II (HEV)	4
AUT 251	Automatic Transmissions I	3
AUT 203	Manual Drive Trains I I	3
----	Human Relations Class (see catalog)	3
		13

Spring Term

Course No.	Title	
AUT 271	Automotive Controller Systems II	4
AUT 260	Diesel Performance II	4
AUT 252	Automatic Transmissions II	2
AUT 216B	**Co-op Work Experience	4
		14
Credits	**Second Year**	**42**

Total Credits 97-101

Summer – second year (industrial partnership option)* discuss

| AUT 216C | **Co-op Work Experience | **4 to 9** |
| AUT 216D | **Co-op Work Experience | **4 to 9** |

*these two CWE requirements would be in place of AUT 216 A/B

**Automotive CWE may be taken after three quarters, including summer. Do not enroll in CWE without first being cleared by your instructor. Exceptions are based on individual student goals.

In addition to this degree, 12 certificates will be awarded as well.

- **Undercar Technician**
- **Automotive Heating and Air Conditioning Technician**
- **Automotive Engine Technician**
- **Automotive Drive Train Technician**
- *Automotive Electrical Technician (basic)*
- *Automotive Electrical Technician (advanced)*
- *Automotive Engine Performance*
- *Automotive Hybrid Electric Vehicles Technician – Level 1*
- *Automotive Hybrid Electric Vehicles Technician – Level 2*
- *Clean Energy Diesel Technician (Advanced)*
- *Automotive Controller Systems Technician Level 1*
- *Automotive Controller Systems Technician Level 2*

Science/Math/Computer Science   12-20
Choose at least four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science

Electives   39
Plus enough additional electives to reach the minimum of 90 credits for the AAOT.
Recommend: ART 115 Basic Design: 2-D, ART 116 Basic Design: Color, ART 117 Basic Design: 3-D and ART 131 Drawing I.

Total Credits 90-106

[1] HHPA activity courses (1 credit each) are not to be duplicated.

ADVISING NOTES
Two years of a world language is recommended. Successful transfer to an upper-division arts school or program is usually based not only on transcripts, but also on the student's portfolio. Students seeking transfer to an accredited art school in Oregon or elsewhere are encouraged to work closely with their advisors to build that portfolio.

AUTOMOTIVE TECHNOLOGY
Automotive Management
Associate of Applied Science

PROGRAM DESCRIPTION
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. Coursework includes technical skills in computer applications, electrical, electronic, mechanical, hydraulic and network systems, both in theory as well as hands-on training. A self-paced method of instruction is offered for the entry-level courses. Communication skills are also highly emphasized throughout each program. The Associate of Applied Science degree enables students to enter the transportation industry as an automotive technician and/or middle management.

ACCREDITATION
National Automotive Technicians Education Foundation (NATEF)

PROGRAM COSTS
(beyond standard tuition/fees and textbooks)
Material Costs
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): $200
- ASE (Automotive Service Excellence) Certification – up to $450 total for all eight areas of testing
- Cost of tools: $1,500 to $2,500 depending on the source

Enrollment Fees
- All AUT prefix courses up to AUT 260 Diesel Performance II have a $15 course fee
- All advanced AUT courses (AUT 260 Diesel Performance II and above) have a $200 course fee

PROGRAM ENTRANCE REQUIREMENTS
Academic Entrance Requirements
- Required:
  - Students must complete the following five courses prior to proceeding into other AUT courses: AUT 101 Basic Electricity-Automotive, AUT 106 Automotive Program Orientation, AUT 107 Mechanical Systems I, AUT 110 Small Gas Engines and AUT 115 College Success for Auto Tech.
- Recommended:
  - High school diploma or GED

PROGRAM PERFORMANCE STANDARDS
Academic Requirements
- Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.

- All courses in the program must be completed with a grade of C or higher.

PROGRAM COURSE REQUIREMENTS
Core Courses

AUT 101	Basic Electricity-Automotive	2
AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2
AUT 104	Automotive Electric III	2
AUT 105	Diesel Performance I	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 111	Computerized Engine Controls	5
AUT 112	Basic Engine Performance I	1
AUT 113	Basic Engine Performance II	1
AUT 114	Welding for the Auto Trade	3
AUT 115	College Success for Auto Tech	2
AUT 201	Automotive Engines	4
AUT 202	Manual Drive Trains I	3
AUT 203	Manual Drive Trains II	3
AUT 204	Steering and Suspension	3
AUT 205	Engine Performance I	2
AUT 206	Engine Performance II	2
AUT 208	Automotive Brakes	3
AUT 216A	CWE Automotive A[1]	4
AUT 251	Automatic Transmissions I	3
AUT 253	Automotive Air Conditioning	3
AUT 256	Automatic Transmissions II	2
BA 101	Intro to Business	4
BA 111	Applied Accounting I	3
BA 178	Customer Service	3
BA 206	Management Fundamentals I	4
BA 223	Marketing Principles I	4
BA 280	Co-op Work Experience Business	3
BA 286	Managing Business Processes	4
or BA 250	Entrepreneurship	

Other Courses

CIS 120	Computer Concepts (or Computer Competency Test)	0-4
HHP 252A	Fitness/First Aid	3
MTH 060	Algebra I (or higher)	4
WR 121	Academic Composition	4

Total Credits 100-104

[1] Automotive CWE may be taken after 24 credits of automotive courses in addition to the basic skills courses, including summer. Students may not enroll in CWE without first being cleared by an instructor. Exceptions are based on individual student goals.

ADVISING NOTES
Full-time students are discouraged from working more than 15 hours each week due to a heavy course load. It is recommended that the ASE (Automotive Service Excellence) certification test be taken as the student completes the program.

Automotive Management: Technology in Electronics and Diagnostics
Associate of Applied Science

PROGRAM DESCRIPTION
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. Coursework includes technical skills in computer applications, electrical, electronic, mechanical, hydraulic and network systems, both in theory as well as hands-on training. Heavy emphasis will be placed on the following three areas: Hybrid Electric Vehicles (HEV) /Electric Vehicles (EV), clean diesel

and on-board vehicle networking. A self-paced method of instruction is offered for the entry-level courses. Communication skills are also highly emphasized throughout each program. Both the Associate of Applied Science degree and Master Automotive Certificate option enable students to enter the transportation industry as an automotive technician and/or middle management.

ACCREDITATION
National Automotive Technicians Education Foundation (NATEF)

PROGRAM COSTS
(beyond standard tuition/fees and textbooks)
Material Costs
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): $200
- ASE (Automotive Service Excellence) Certification – up to $450 total for all eight areas of testing
- Cost of tools: $1,500 to $2,500 depending on the source

Enrollment Fees
- All AUT prefix courses up to AUT 260 Diesel Performance II have a $15 course fee
- All advanced AUT courses (AUT 260 Diesel Performance II and above) have a $200 course fee

PROGRAM ENTRANCE REQUIREMENTS
Academic Entrance Requirements
- Required:
  - Students must complete the following five courses prior to proceeding into other AUT courses: AUT 101 Basic Electricity-Automotive, AUT 106 Automotive Program Orientation, AUT 107 Mechanical Systems I, AUT 110 Small Gas Engines and AUT 115 College Success for Auto Tech.
- Recommended:
  - High school diploma or GED

PROGRAM PERFORMANCE STANDARDS
Academic Requirements
- Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- All courses in the program must be completed with a grade of C or higher.

PROGRAM COURSE REQUIREMENTS
Core Courses

AUT 101	Basic Electricity-Automotive	2
AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2
AUT 104	Automotive Electric III	2
AUT 105	Diesel Performance I	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 111	Computerized Engine Controls	5
AUT 115	College Success for Auto Tech	2
AUT 201	Automotive Engines	4
AUT 202	Manual Drive Trains I	3
AUT 203	Manual Drive Trains II	3
AUT 204	Steering and Suspension	3
AUT 205	Engine Performance I	2
AUT 206	Engine Performance II	2
AUT 208	Automotive Brakes	3
AUT 216A	CWE Automotive A[1]	4
AUT 216B	CWE Automotive B	4
AUT 251	Automatic Transmissions I	3
AUT 253	Automotive Air Conditioning	3
AUT 256	Automatic Transmissions II	2
AUT 260	Diesel Performance II	4
AUT 270	Auto Controller Systems I	4
AUT 271	Auto Controller Systems II	4
AUT 280	Hybrid Electric Vehicles I (HEV)	4
AUT 281	Hybrid Electric Vehicles II (HEV)	4

Other Requirements

BA 178	Customer Service	3
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
CIS 131	Software Applications	4
HHP 252A	Fitness/First Aid	3
MTH 060	Algebra I (or higher)	4
WR 121	Academic Composition	4

Total Credits 101-104

[1] Automotive CWE may be taken after 24 credits of automotive courses in addition to the basic skills courses, including summer. Students may not enroll in CWE without first being cleared by an instructor. Exceptions are based on individual student goals.

ADVISING NOTES
Full-time students are discouraged from working more than 15 hours each week due to a heavy course load. It is recommended that the ASE (Automotive Service Excellence) certification test be taken as the student completes the program.

Master Automotive Technician
Certificate of Completion

PROGRAM DESCRIPTION
The Master Automotive Technician 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. Coursework includes technical skills in computer applications, electrical, electronic, mechanical, hydraulic and network systems, both in theory as well as hands-on training. A self-paced method of instruction is offered for the entry-level classes. Communication skills are also highly emphasized throughout the program. The program is planned so that students will be able to complete the Master Automotive Technician Certificate in approximately 12 to 15 months as well as earn up to seven short-term certificates of completion. The certificate enables students to enter the transportation industry as an automotive technician.

ACCREDITATION
National Automotive Technicians Education Foundation (NATEF)

PROGRAM COSTS
(beyond standard tuition/fees and textbooks)
Material Costs
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): $200
- ASE (Automotive Service Excellence) Certification – up to $450 total for all eight areas of testing
- Cost of tools: $1,500 to $2,500 depending on the source

Enrollment Fees
- AUT prefix courses may have a $15 course fee based on lab usage

PROGRAM ENTRANCE REQUIREMENTS
Academic Entrance Requirements
- Required:
  - AUT 106 Automotive Program Orientation is a prerequisite or co-requisite to AUT 101 Basic Electricity-Automotive, AUT 110 Small Gas Engines and AUT 115 College Success for Auto Tech. These four courses are prerequisites to all other AUT courses.
- Recommended:
  - High school diploma or GED

PROGRAM PERFORMANCE STANDARDS
Academic Requirements
- Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- All courses in the program must be completed with a grade of C or higher.

ARH 202 - ART HISTORY: WESTERN: EARLY MEDIEVAL TO LATE RENAISSANCE

Surveys the major periods of visual arts in the West. Introduces students to the concepts of art and surveys the development of art in historical context from the Early Middle Ages through the Late Renaissance. Emphasizes selected works of painting, sculpture, architecture, and other arts studied in relation to the cultures producing them. Recommended preparation: WR 065.
Credits: 4   **Lecture:** 4

ARH 203 - ART HISTORY: WESTERN: EARLY BAROQUE TO LATE 20TH CENTURY

Surveys the major periods of visual arts in the West. Introduces students to the concepts of art and surveys the development of art in historical context from the Baroque Age through the 20th Century. Emphasizes selected works of painting, sculpture, architecture, and other arts studied in relation to the cultures producing them. Recommended preparation: WR 065.
Credits: 4   **Lecture:** 4

ARH 206 - MODERN ART HISTORY

A specialized chronological survey of Modernism in the visual arts from the mid-19th Century to the present day. Explores the many eclectic developments in Modern art from its beginnings through the Postmodern contemporary era. Emphasizes major artists, movements, and critical concepts in modern art and theory, and relates those concepts to the art of the past as well as issues facing artists and society today.
Credits: 4   **Lecture:** 4

ARH 207 - NATIVE AMERICAN ART HISTORY

Survey of the arts indigenous to Mesoamerican and North American Indian cultures emphasizing architecture, pottery, painting and the fiber arts.
Credits: 4   **Lecture:** 4

ARH 208 - ART HISTORY: NON-WESTERN

A specialized survey of the art of Non-Western cultures around the world, from the Prehistoric past through the present day. This course will examine the artistic and cultural traditions of Islam , India, East Asia, the Pacific Islands, Sub-Saharan Africa and the Americas. The course will focus on understanding select works of art and architecture within their original cultural, religious, and historical contexts, and will contrast various Non-Western artistic philosophies and values with those of the Western world. Recommended preparation: WR 065.
Credits: 4   **Lecture:** 4

ARH 298 - INDEPENDENT STUDY: ART HISTORY

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: Instructor approval. Recommended preparation: prior coursework in the discipline.
Credits: 1 to 4

AUTOMOTIVE

AUT 101 - BASIC ELECTRICITY FOR AUTOMOTIVE

Provides understanding of fundamental principles of electricity. Covers basic electrical quantities, Ohm's law, power, series, and parallel circuits, magnetism, electromagnetism and an introduction to DC-current troubleshooting. Introduces student to the use of a digital multimeter and oscilloscope. Student will also be introduced to electrical schematics. A self-paced course. Prerequisite with concurrency: AUT 106.
Credits: 2   **Lab:** 6

AUT 102 - AUTOMOTIVE ELECTRIC I

Covers Automotive Electrical Skills. Introduces the testing, diassembly, and rebuilding of various electrical equipment. Troubleshooting and using various test equipment common to the Automotive trade will be stressed. Introduces the use of automotive scan tools for basic diagnostics. Introduces the use of intrusive and non-intrusive testing methods.

Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115. Recommended preparation: MTH 020 or higher or minimum placement into MTH 060.
Credits: 5   **Lecture:** 2 **Lab:** 9

AUT 103 - AUTOMOTIVE ELECTRIC II

Studies disassembly, testing and rebuilding of various electrical equipment. Stresses troubleshooting and using various test equipment common to the automotive trade. Prerequisites: AUT 102.
Credits: 2   **Lecture:** 1 **Lab:** 3

AUT 104 - AUTOMOTIVE ELECTRIC III

A hands-on study and familiarization of repair procedures for air bag, security entry and cruise control systems. Learn diagnostic and repair procedures using body control modules. Learn diagnostics and repair procedures for hybrid and new electrical systems. Prerequisites: AUT 103.
Credits: 2   **Lecture:** 1 **Lab:** 3

AUT 105 - DIESEL PERFORMANCE I

Introduces principles of diesel systems and basic diagnosis. Includes engine analysis, cooling and exhaust systems, fuel management systems and diesel engines. Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.
Credits: 2   **Lecture:** 1 **Lab:** 3

AUT 106 - AUTOMOTIVE PROGRAM ORIENTATION

Introduction to the Automotive program. Provides an introduction of the fundamental principles of automotive shop safety and tool care. Guidance given on the self-paced course format. This course is required prior to taking any automotive course. This is a three-day, intensive course that is only taught at the beginning of each term. Permissible to be taken in a term along with other automotive courses. Recommended preparation: or to be taken with AUT 101, AUT 107, AUT 110, AUT 115, and MTH 020 or higher or minimum placement into MTH 060.
Credits: 1   **Lecture:** 1

AUT 107 - MECHANICAL SYSTEMS I

Provides an understanding of the fundamental principles of automotive shop safety and tool care. Develops mechanical knowledge and skills utilized throughout a career in the automotive field. Includes techniques of routine vehicle maintenance. Includes customer vehicle identification and handling, new vehicle pre-delivery inspection and preparation, safety inspection, lubrication tasks, and light line tasks. A self-paced course. Prerequisites with concurrency: AUT 106.
Credits: 3   **Lab:** 9

AUT 110 - SMALL GAS ENGINES

Designed to study and apply the theory, operation, diagnoses and repair of small gas engines and their use in the world today. A self-paced course. Prerequisites with concurrency: AUT 106.
Credits: 3   **Lab:** 9

AUT 111 - COMPUTERIZED ENGINE CONTROLS

Studies advanced electrical systems found on late-model vehicles. Provides solid understanding of computerized automotive engine control systems and how they operate and the ability to diagnose, troubleshoot and repair computerized engine control systems. Prerequisites: AUT 205.
Credits: 5   **Lecture:** 2 **Lab:** 9

AUT 112 - BASIC ENGINE PERFORMANCE I

This course is designed to study and apply the theory, operation, diagnoses and repair of the points-type ignition and carburetion systems as they were used in vehicles of the past. Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.
Credits: 1   **Lab:** 2

AUT 113 - BASIC ENGINE PERFORMANCE II

Designed to continue the study and apply the theory presented in AUT 112 Basic Engine Performance I. Continues with the operation, diagnoses, and repair of the carburetion system as it was used in vehicles of the past. Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.
Credits: 1   **Other:** 2

AUT 114 - WELDING FOR THE AUTOMOTIVE TRADE
Provides a basic understanding of the fundamental principles of automotive fabrication, including safety topics. Topics introduce students to focused areas that are required when replacing vehicle components that include a light level of fabrication. (A scheduled self-paced course). Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110, and AUT 115.
Credits: 3   Lab: 9

AUT 115 - COLLEGE SUCCESS FOR AUTOMOTIVE TECHNOLOGY
Prepares students for successful completion of the Automotive Technology degree at COCC and explores careers as an automotive technician and professional. Offers a condensed version of the College Success course geared toward the two Automotive Technology degrees and/or the multiple Automotive Certificates. Introduces the various automotive information systems, hand tool usage, Scan Tool introduction, and resume preparation. Prerequisites with concurrency: AUT 106. Recommended preparation: or to be taken with MTH 020 or higher or minimum placement into MTH 060.
Credits: 2   Lecture: 2

AUT 199 - SELECTED TOPICS: AUTOMOTIVE
This course is in development.
Credits: 1 to 4

AUT 201 - AUTOMOTIVE ENGINES
Provides information on the construction, operation and design of the internal combustion engine. Teaches the concepts and procedures of engine work to cover the proper procedure in rebuilding a four-cycle internal combustion engine. Includes a combination of guided lecture and laboratory applications, stressing safety, accuracy of measure, proper usage of tools, and application of repair manuals through actual overhaul of engines. Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115. Recommended preparation: MTH 020 or higher or minimum placement into MTH 060.
Credits: 4   Lecture: 2 Lab: 6

AUT 202 - MANUAL DRIVE TRAINS I
A self-paced course that studies standard transmissions and transaxles. Students will learn on college-owned components. The students will learn operating principles, diagnosis, construction, approved repair procedures, and overhaul of current transmission types on manual transmissions and transaxles. Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115. Recommended preparation: MTH 020 or higher or minimum placement into MTH 060.
Credits: 3   Lab: 9

AUT 203 - MANUAL DRIVE TRAINS II
Second part of a manual transmission sequence. A study of standard transmission and the relationship to clutches, driveshafts, rear axle assembly, transaxle, shift controls and four-wheel drive components. Students will learn on college-owned components. The student will learn operating principles, diagnosis and approved repair procedures on manual transmissions and related power train components. Includes emphasis on diagnosis, service, and procedure to conform to current service manuals. Prerequisites: AUT 202.
Credits: 3   Lecture: 1.2 Lab: 6

AUT 204 - STEERING AND SUSPENSION
Designed to study and apply the theory, operation, diagnoses and repair of the modern suspension and steering systems. Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115. Recommended preparation: AUT 208.
Credits: 3   Lecture: 1.2 Lab: 6

AUT 205 - ENGINE PERFORMANCE I
Studies the diagnosis of drivability problems. Covers engine analysis, cooling and exhaust systems, ignition and fuel management systems. Prerequisites: AUT 103.
Credits: 2   Lecture: 1 Lab: 3

AUT 206 - ENGINE PERFORMANCE II
Studies diagnosis of drivability problems. Includes further study of engine analysis, ignition and fuel management systems, and super performance diagnosis. Provides the technician with a look into the causes of automotive emissions in relation to vehicles that are four years old and newer. Looks at various methods of emissions inspection/maintenance testing, the diagnosis of failed vehicles, and enhanced on-board computer systems. Also covers the testing of alternative-fuel vehicles. Prerequisites: AUT 111.
Credits: 2   Lecture: 1 Lab: 3

AUT 208 - AUTOMOTIVE BRAKES
Studies the theory, operation, diagnosis and repair of the modern braking systems of both domestic and import vehicles. Includes an introduction to anti-lock brake systems. Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115. Recommended preparation: MTH 020 or higher or minimum placement into MTH 060.
Credits: 3   Lecture: 1.2 Lab: 6

AUT 211 - ASE TEST PREP I
This self-paced, program-specific course allows the student to study in preparation for the ASE A1-A5 areas. Recommended preparation: completion of two terms of Automotive Technology curriculum and WR 060.
Credits: 1   Lab: 3

AUT 212 - ASE TEST PREP II
This self-paced, program-specific course allows the student to study in preparation for the ASE A6-A8 areas. Recommended preparation: completion of two terms of Automotive Technology curriculum and WR 060.
Credits: 1   Lab: 3

AUT 216 - CO-OP WORK EXPERIENCE AUTOMOTIVE
Provides an environment in which students can begin to recognize their strengths and limitations in their chosen career. The student is placed in an actual job environment where pressure, production and personalities are experienced. Cooperative Work Experience is a program requirement for students in the Automotive Technology program. Two CWE sections are required for the student who will achieve the Master Automotive Technician Certificate. Prerequisites: completion of two terms of Automotive Technology curriculum.
Credits: 1 to 4

AUT 216A - CWE AUTOMOTIVE A
The student is provided with the environment in which he/she can begin to recognize his/her strengths and limitations in their chosen career. The student is placed in an actual job environment where the experiences of pressure, production, and personalities are experienced. Cooperative Work Experience, is a program requirement for students in the Automotive Technology Program. Two CWE sections are required for the student who will achieve the Master Automotive Technician Certificate. 4 credits per section (144 hours). Prerequisites: instructor approval. Recommended preparation: at least 24 credits of automotive courses.
Credits: 4

AUT 216B - CWE AUTOMOTIVE B
The student is provided with the environment in which he/she can begin to recognize his I her strengths and limitations in their chosen career. The student is placed in an actual job environment where the experiences of pressure, production, and personalities are experienced. Cooperative Work Experience, is a program requirement for students in the Automotive Technology Program. Two CWE sections are required for the student who will achieve the Master Automotive Technician Certificate. 4 credits per section (144 hours). Prerequisites: instructor approval. Recommended preparation: at least 24 credits of automotive courses.
Credits: 4

AUT 251 - AUTOMATIC TRANSMISSIONS I
Provides an understanding of the basic principles and theory of planetary gear sets, torque converters and hydraulic controls as applied to automatic transmissions. Includes construction, operation and overhaul

of current transmission types with emphasis on diagnosis, service and procedures to conform to current service manuals. A self-paced course. Prerequisites: AUT 203.
Credits: 3 Lab: 9

AUT 253 - AUTOMOTIVE AIR CONDITIONING
A hands-on study of automotive air conditioning and heating systems, concurrent with EPA Recovery Requirements for R-12, R-134a systems, diagnosis and service. A study of advanced electrical systems found on late-model vehicles. Prerequisites: AUT 102. Recommended preparation: MTH 020 or higher or minimum placement into MTH 060.
Credits: 3 Lecture: 1.2 Lab: 6

AUT 256 - AUTOMATIC TRANSMISSIONS II
This is the second part of an automatic transmission sequence. This course will continue principles and theory of planetary gear sets, torque converters, and hydraulic controls as applied to automatic transmissions. Includes emphasis on diagnosis, service, and procedures to conform to current service manuals. The student will also be introduced to Constant Velocity Transmissions/Hybrid Electric
Vehicles/Electric Vehicle type transmissions. Prerequisites: AUT 251.
Credits: 2 Lecture: 1 Lab: 3

AUT 260 - DIESEL PERFORMANCE II
This is the second part of a diesel performance sequence. This course will provide the operational principles and theory of: Hydraulically actuated Electronically controlled Unit Injection **(HEUI) systems, the Electronic Unit Injection *(EUI) systems, and the Common Rail (CR) systems, as they are applied to Diesel Engine Performance. The course will include, in depth, Controller Area Networking (CAN),multiplexing, Controller Area Networking (CAN C) language (J1939 protocol), Software Updates, (J2534 re-flash), Vehicle Communication Interface (VCI), Selective Catalytic Reduction (SCR), Exhaust Gas Recirculation (EGR) systems, Variable Geometry Turbo-chargers (VGT}, Constant Geometry Turbo-chargers (CGT) systems, Diesel Particulate Filter (DPF) variations, Diesel Oxidation Catalyst (DOC) systems, and diagnostic strategies, that will lead to accurate conclusions. The student will be exposed to multiple vehicle product lines during this course and,will be introduced to the proper techniques and procedures to repair them. Prerequisites: AUT 206.
Credits: 4 Lecture: 2 Lab: 6

AUT 270 - AUTOMOTIVE CONTROLLER SYSTEMS I
Technological advancements in modern vehicles have changed how we perform diagnosis. This course examines various methods of those enhancements of automotive drive systems, with major emphasis on electronic programing, and how to accurately repair them, using computers and scan tools. This course will require the student technician to build on current diagnostic routines into advanced applications. Prerequisites: AUT 206.
Credits: 4 Lecture: 2 Lab: 6

AUT 271 - AUTOMOTIVE CONTROLLER SYSTEMS II
Vehicle performance is enhanced by a variety of methods. This course examines various methods of performance enhancements of automotive drive systems with major emphasis on electronic programing. Manufacturer scan tools will be included with vehicle testing. Prerequisites: AUT 206. Recommended preparation: AUT 270.
Credits: 4 Lecture: 2 Lab: 6

AUT 280 - HYBRID ELECTRIC VEHICLES I
A study of HEV (hybrid electric vehicles) and EV (electric vehicles). Safety procedures will be strongly emphasized. Vehicle systems that will be covered: Hybrid safety and service procedures, introduction to hybrid batteries and service, introduction to hybrid electric motors, generators, and controls, regenerative braking systems, introduction to hybrid vehicle transmissions and transaxles, hybrid vehicle heating and air conditioning, first responder safety and procedures, introduction to manufacturer scan tools, hybrid vehicle diagnostic trouble codes. Prerequisites: AUT 206.
Credits: 4 Lecture: 2 Lab: 6

AUT 281 - HYBRID ELECTRIC VEHICLES II
A study of HEV (hybrid electric vehicles) and EV (electric vehicles) part 2. Safety procedures will be strongly emphasized. Vehicle systems that will be covered include: Hybrid safety and service procedures, advanced hybrid batteries testing and service, advanced testing of hybrid electric motors, generators, and controls along with extensive manufacturer scan tools use and vehicle testing. Prerequisites: AUT 206. Recommended preparation: AUT 280.
Credits: 4 Lecture: 2 Lab: 6

AVIATION

AV 101 - INTRODUCTION TO AVIATION
This course introduces the student to the Federal Aviation Regulations/Aeronautical Information Manual (FAR/AIM). Designed to build an understanding of the pilot credentials required for a career in aviation and help students explore various career options. A variety of employment opportunities are investigated, including commercial, business, corporate, military and general aviation-related business. Emphasis will be given to careers in operations and flight technology. Airplane and helicopter pilot careers will be emphasized.
Credits: 3 Lecture: 3

AV 104 - INTRODUCTION TO AIRCRAFT SYSTEMS
Introduces the student to the training aircraft that are used in general aviation, and will look in detail at those aircraft used in this program. Aircraft in current use for training by industry will be studied and emphasis placed on basic aircraft systems operations, including emergencies. Applicable Federal Aviation Regulations, including the use of Minimum Equipment Lists, will be studied.
Credits: 4 Lecture: 4

AV 108 - METEOROLOGY I
A survey course in atmospheric science that covers weather basics and atmospheric circulations. Included is a systematic development of the following: the atmosphere, energy and temperature, wind, atmospheric moisture, horizontal and vertical pressure patterns, clouds, atmospheric circulation, stability, air masses, fronts, fog, icing, thunderstorms, jet streams and turbulence. Students will study surface weather observations, routine weather reports and forecasts, surface maps and constant pressure maps.
Credits: 4 Lecture: 4

AV 110 - PRIVATE PILOT - AIRPLANE
Provides initial ground instruction in aeronautical skills and knowledge for the FAA Private Pilot certificate. Involves an introduction to fundamentals of flight, aerodynamics, flight operations, airspace, weather and weather products, flight planning, decision-making, human factors, human factors in aviation, and crew resource management. Comprehensive course that prepares student for the FAA Private Pilot airman knowledge written exam. Recommended preparation: MTH 020 or higher.
Credits: 5 Lecture: 5

AV 112 - TECHNICALLY ADVANCED AIRCRAFT
The course covers the differences in design, handling characteristics, capability and operation of complex avionics packages in today's modern aircraft. Course will concentrate on the Garmin 430, Garmin 500, Garmin 750, and Garmin 100 glass cockpit systems.
Credits: 1 Lecture: 1

AV 112A - TECHNICALLY ADVANCED AIRCRAFT LAB
The lab course provides one-on-one hands-on training in a simulator using the (FAA)-Industry Training Standards (FITS) program that emphasizes the importance of "real world" training exercises in the form of scenario training. Students will learn to program and utilize advance automated flight decks. P/NP grading.
Credits: 1 Lab: 3.2

STAGE 2: CONCEPT DEVELOPMENT FOR ACADEMIC AFFAIRS

2.1 **Program Overview:** AAS of Automotive Technology in Electronics and Diagnostics (TED)

This degree is an addition to our current Master Automotive Technician Certificate, with emphasis on the electrical / electronic portions of the automotive industry. Three major areas are included in this proposal: electronic and hybrid power systems, clean diesel, and on-board vehicle networking. The title places emphasis on the ever-advancing electronics that are contained on all current vehicles, clearly stating the intent of the degree. Degree seeking students are still able to take short-term certificate courses from other certificate areas and receive a degree plus short-term certificates. The accrediting body of the COCC Automotive Technology Program is NATEF (National Automotive Technicians Education Foundation). Many of the electronic competencies in certifying areas, required by NATEF, are embedded into the current A1 through A9 NATEF Certifications. With the new degree, the Automotive Program will be very effective preparing graduates for the full range of vehicle technology.

2.2 **Certificate or Degree Options**

Associate of Applied Science (AAS): Generally two years of full-time coursework; includes some general education course requirements; remaining credits tailored towards career-related coursework; see AAS checklist in COCC catalog. Current examples include structural fire science and early childhood education.

2.3 **Curriculum Planning:** *Provide a course of study to include course titles, credits per course, prerequisites, and general education requirements, as well as the anticipated delivery method (in person, online, hybrid, self-paced) and the campus location in which the program will be offered.*

Attachment A – catalog courses that includes course title, credits, prerequisites

The prerequisites are included in the current catalog for 2018-2019. The delivery method is – self-paced for the entry-level courses (all lab) and standard delivery for all other courses.

I have updated the website for the TED degree that matches the 2018-2019 catalog. km

2.4 **Enrollment Projections:** *Provide anticipated enrollment, including information on data source.*

Included is a snapshot of enrollment for four full years- Automotive Technology
Attachment B - Headcount of Students Enrolled for Credit and Non-Credit Automotive Courses

This snapshot shows a duplicated headcount of 1,005 students during the 2014-2015 year and a decline of enrollment to the 2017-2018 year of 639 students. This follows the projections and real numbers from the college student population. As a result of this data, the department has reduced cost in the area of part-time instructors and reduced open shop hours for the new self-paced / basic skills students. In the meantime, the Automotive Program instructors are involved in increased outreach to local high schools and selected recruiting events. With assistance from

the NSF / ATE Grant, we are hiring a dedicated Outreach Liaison to further connect with students in underserved areas of our college district. The program was involved with IWITTS* Training to help attract women into a male dominant program. As a result, we developed and are now offering a College Success for Automotive Technology (AUT 115), that is designed to promote student success and retention. We are well positioned to take advantage of what we have experienced and learned to capture future success with student numbers with a broader student representation.

*National Institute for Women in Trades, Technology, and Science

Attached is a three-year enrollment for all students who have taken one of the advanced courses in the TED option
Attachment C - Advanced Automotive courses offered at the Redmond Tech Center
With the help of a small grant from National Science Foundation / Advance Technological Education, COCC developed and offered five advanced automotive courses embedded into an option degree aligned with the AAS Automotive Management. The three years of data shows credit and non-credit students preparing for current and future technologies. The range of student participation has been between 5 and 10 students per section. The spaces allotted for instruction limit the advanced lab spaces to 12. Interesting – after the three-year data collection, we started this fall, 2018 with full classes – 12 students.

Attachment D – Demographic Data – Student Success

2.5   Preliminary Budget: *Describe anticipated revenue, including tuition and specialized fees; implementation budget, including whether a content expert is needed and/or load relief for existing faculty is recommended; operational budget; accreditation requirements affecting budgets, including program delivery, staffing, budget, or other factors. Additionally, the program developer should meet with the grants coordinator to determine if outside grant opportunities exist that may assist with implementation or on-going costs.*

   a.   The NSF / ATE Mentor-Connect small grant helped the TED degree launch, with curriculum development, equipment, and beta testing.
   b.   To supplement the Material and Supplies budget, the department manages an Industrial budget that is profit bearing. We do charge our customers a small fee for parts and a shop fee of $35.
   c.   Students pay lab fees on most classes ($15) ($200 on advanced courses) that also goes into the Industrial Account.
   d.   A separate account has been established to charge college employees for the use of the Hybrid fleet (maintained by the Automotive Program). This is a charge per mile – and helps to maintain the vehicles used for the hybrid / electric classes at RTC.
   e.   I really appreciate that load relief is being considered in this application. It is not required at this stage.
   f.   No additional staffing or budget is needed.
   g.   We do require an Accreditation visit every five years. We have been supported by the VPI office on such occasions.

2.6   **Instructional Requirements:** *Describe the following, noting that this will be expanded upon in Stage 3:*

     a.   *Describe the anticipated organizational structure, including staffing needs such as program director, full-time faculty, adjunct faculty, part-time instructor, support staff, specialized program staff, and other anticipated staffing needs. Include which existing department will have oversight for the program and minimum qualifications for new faculty.*

         Oversight by the NIR Department Chair and Automotive Program Director

         Staffing rises and falls based on the student demand. We do not anticipate a major surge, but are marketing for an incremental increase. Because of the entry point (basic skills courses) for all students, we can forecast what will be needed in the next term or next year. We have been successful in accommodating students so far. Staffing for the tool room is also flexible. Between work-study and part time hourly instructional lab assistants, we are able to absorb additional students.

     b.   *Recognizing that career and technical education programs often have requirements which apply only to that program, the program developer should include information on unique aspects of the program. Considerations include, but are not limited to, specialized instruction, support, or other staffing; disability considerations; student/faculty ratio; and specialized facilities or equipment; internships; unique or high cost students expenses such as certification exams.*

         The program has adapted to all requirements stipulated in the catalog. The five new classes that make up the advanced portion of this degree are held at the newer facility – Redmond Technical Center. Due to the space and safety considerations, the five advanced classes have a limit of 12. Students in the advanced courses pay a $200 per class lab fee to help purchase and maintain the equipment for that portion of the program. This fee was approved by College Affairs – 17 May 2013.

     c.   *After meeting with other academic departments who may provide needed support courses, describe instructional impacts to other academic departments. Examples include need for specialized courses or prerequisites.*

         Communication with the related departments occurred when the TED Degree option was proposed and approved in the 2013 academic year. No impacts were identified at that time. To update, I have asked the Chairs of the following departments for inputs or concerns: Math, CIS, Human Development, and Business (2018).

2.7   **Faculty Position Requests:** *Department chair begins discussion of position needs with ChairMoot (not required for Academic Affairs approval).*

     No additional faculty support

2.8   **Potential Policy Impacts:** *Describe any new policies or changes to existing policies needed to support this program, working with the instructional dean to determine appropriate approval process.*

No policy changes

2.9   **Updated Implementation Timeline:** *Review and update information provided in previous Stage.*

The timeline plan is to start fall 2019

2.10   **Additional Information**: Provide additional information that may be helpful in the decision process, including any extraordinary needs unique to the proposed program.

STAGE 3: PROGRAM AND BUDGET PLANNING

The following serves as a guideline for program and budget planning steps, noting that while the items below are numbered, *they are not intended to take place in a chronological format*. As an example, while the program developer is working through the first several steps, s/he can also begin meetings with departments listed in the "resource planning" section.

3.1   **Content Expert:** *Determine the proposed hiring process and timeline for the faculty/content expert identified in stage 4.1; note that depending on the nature of the program, the content expert could be a professional or association.*

Due to already having a content expert in place there is no need to hire additional faculty to support this proposal. The current position is filled with Paul Pelly who has a strong automotive technology background including General Motors Master Technician. Paul has been invited to design and teach three of the advanced courses at Redmond Tech Center. These three courses include clean diesel, on vehicle controller systems, along with hybrid and electric vehicles. The Automotive Advisory Committee were instrumental in the subject areas selected during the 2013 year as we sought input for the degree design.

3.2   **Program Planning Team:** *The program developer may wish to establish a program planning advisory committee, in addition to the implementation team. The Program Planning Advisory Team may include internal faculty or staff, experts from within the specific industry or discipline, or other sources needed to successfully develop program content and implement the program. Individuals are not guaranteed a position as part of the permanent advisory committee (see step 6.4) and/or faculty.*

Prior to seeking industry input, then VPI Karin Hilgersom, initiated a meeting with current students along with the Automotive Advisory. Dean Diana Glenn participated as we also celebrated the 50th year of the Automotive Technology Program at COCC (2008). Mr. Robert Maxwell also attended – who helped to start the Automotive Program in 1958. There were close to 100 participants at that time. VPI Hilgersom and I collected student and advisory input, which contributed to the new program proposal and the Redmond Tech Center building design. In addition, to further research the possibility of a clean diesel component, Dean Jenni Newby and I met with representatives of the Central Oregon Diesel Industry for additional input before new courses were proposed. To better prepare for the hybrid and electric vehicle curriculum, I attended classes at Portland Community College in the summer instructor training that gave me a glimpse of the possibilities of how we should proceed. Dean Michael Fisher was involved in the new curriculum / degree proposal process.

3.3   **Program and Degree Outcomes:** *Include the finalized program/degree outcomes; see examples of program outcomes as listed in the COCC Catalog.*

AAS Automotive Technology in Electronics and Diagnostics – Program Outcomes

1. Communication - Demonstrate oral and written strategies for directing automotive employees to perform duties correctly and to communicate with managerial staff members clearly.

2. Diagnose and Analyze Specialized Areas - Demonstrate how to use defined procedures to accurately assess problem solving in vehicle application issues, in personnel behaviors, and in addressing clients concerns, in a manner that is most likely to lead to a successful outcome.

3. Professional - - Model professional practices of the automotive industry and the needs of a service environment, by demonstrating team attitude, displaying management behavior in regard to tasks, by behavior specific to management tasks related to the concern, and by keeping an orderly, task-based mindset of learned processes document.

4. Certification - Substantiate knowledge of up-to-date automotive and service industry practices by successfully completing NATEF, and Master Automotive Service Excellence Certification {levels Al-A8, from Engine Repair to Engine Performance).

5. Advanced Vehicle Training – Demonstrate skills in electric drive vehicle systems, by building competency in hybrid and electric vehicles, reprogramming and custom programing vehicle control systems, and application of clean diesel practices.

6.   Preparation – Students completing this degree will be well prepared to enter the field of safety systems diagnostics that are being rapidly deployed and introduced at multiple levels of the transportation industry that requires extensive computer network training. (examples: automatic highway braking; driverless vehicles in communication to everything; LAN radar; automatic parking)

3.4   **Resource Planning and Communication:** *The program developer should meet with campus departments affected by the startup of a new program to discuss any specialized requirements affecting administrative departments and give the department director an opportunity to be aware of new programs. Feedback from these discussions should be included in this step, noting that none of the departments have the ability to approve or deny a program proposal. Departments include, but are not limited to:*

a. Program Administrative Assistant
b. Admissions and Records/Registrar
c. Bookstore
d. Campus Services
e. CAP Center
f. College Now
g. College Relations
h. Disability Services
i. Financial Aid
j. Information Technology Services
k. Instructional Technology (Blackboard)
l. Library
m. Risk Management
n. Tutoring and Testing

AAS of Automotive Technology in Electronics and Diagnostics (TED) new program proposal

Communication and planning was done when this degree option was established / approved during the 2013 academic year. Even so, I am sending out the new degree to multiple campus departments to ensure we are connected on this new degree. Comments or suggestions will be recorded and shared with the Dean Michael Fisher.

5.a. Demographic data

COCC Annual Student Enrollment
Credit Students by Program
Program is self-declared by student. A student's last program for the academic year is shown.
Data is suppressed at values less than 6 indicated by -0.1

Discipline:	Program:	Program Type:	Certificate/Degree Seeking Status:
AUTO	All	CTE	All

Students by Program Type
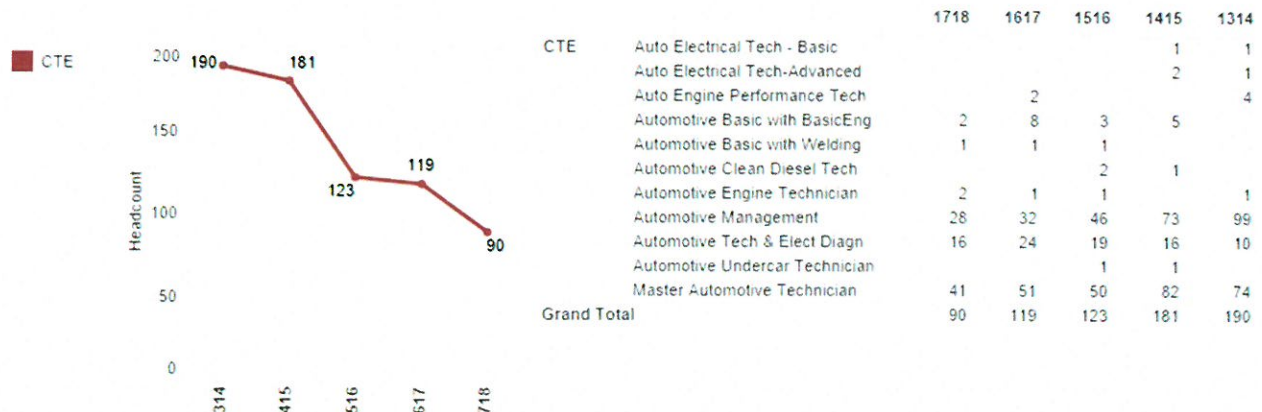
		1718	1617	1516	1415	1314
CTE	Auto Electrical Tech - Basic				1	1
	Auto Electrical Tech-Advanced				2	1
	Auto Engine Performance Tech		2			4
	Automotive Basic with BasicEng	2	8	3	5	
	Automotive Basic with Welding	1	1	1		
	Automotive Clean Diesel Tech			2	1	
	Automotive Engine Technician	2	1	1		1
	Automotive Management	28	32	46	73	99
	Automotive Tech & Elect Diagn	16	24	19	16	10
	Automotive Undercar Technician			1	1	
	Master Automotive Technician	41	51	50	82	74
Grand Total		90	119	123	181	190

Students by Age
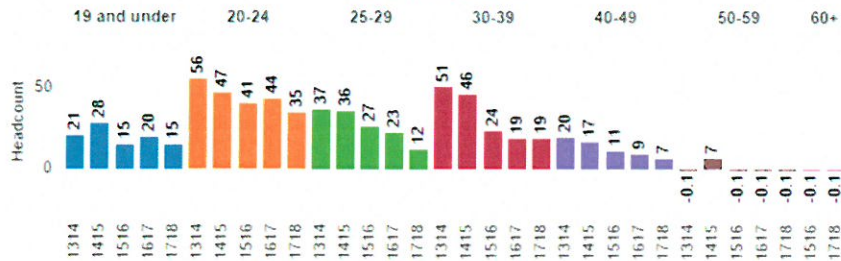
Students by Gender
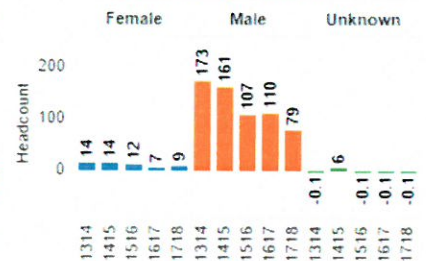
Students by Race/Ethnicity
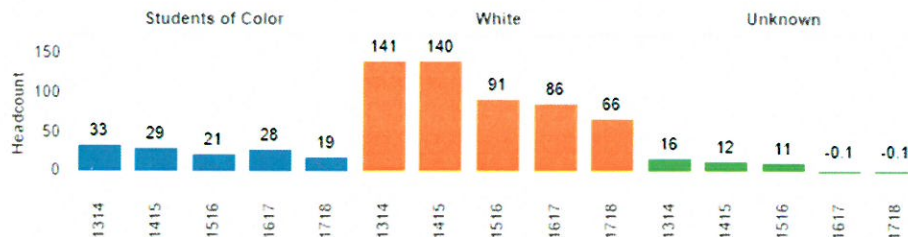
Students of Color Broken out by Race/Ethnicity
Students are unduplicated within a category, but could be duplicated between categories. Example: if a student is Hispanic and Native American, they are counted once in both categories.
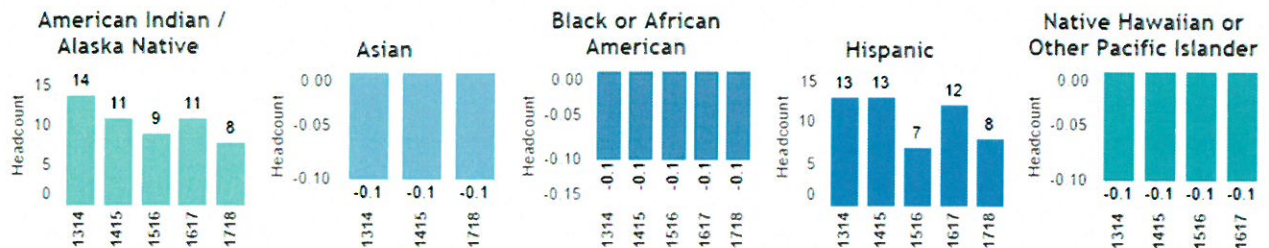
COCC Completions Report
Number of Completions by Discipline and Program

Select Discipline:
AUTO

Select Term:
All

Overall Number of Completions - Discipline Compared to COCC

Discipline

COCC
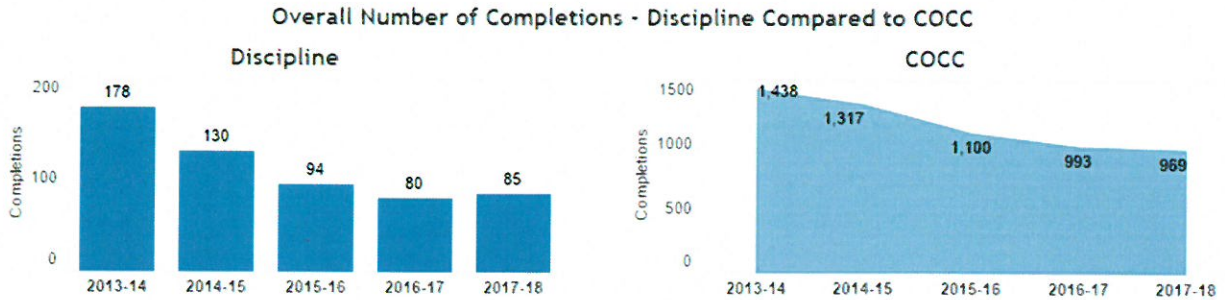
Number of Completions by Program
CTE Completions

CTE - Associate of Applied Science | CTE - 1-2yr Certificate | CTE - Less than 1yr Certificate

Number of Completions by Discipline and Program

			2013-14	2014-15	2015-16	2016-17	2017-18
AUTO	CTE - 1-2yr Certificate	Master Automotive Technician	5	7	6	10	5
	CTE - Associate of Applied Science	Automotive Management	1	8		4	3
	CTE - Less than 1yr Certificate	Auto Electrical Tech - Basic	26	20	17	4	14
		Auto Electrical Tech-Advanced	24	8	16	6	10
		Auto Engine Performance Tech	28	10	8	10	10
		Automotive Basic with BasicEng	2	3	1	6	8
		Automotive Basic with Welding		8	7	3	3
		Automotive Clean Diesel Tech		3	2	5	3
		Automotive Controller Tech I		5	3	2	3
		Automotive Controller Tech II			1	1	2
		Automotive Drive Train Tech	17	11	7	4	4
		Automotive Engine Technician	23	11	6	9	7
		Automotive Heating & AC Tech	26	12	8	6	4
		Automotive Hybrid Elec Tech I		3	4	1	3
		Automotive Hybrid Elec Tech II		3	3	1	1
		Undercar Technician	26	18	5	8	5
Grand Total			178	130	94	80	85

6.a. Enrollment

COCC Annual Student Enrollment
Credit Enrollment by Discipline

Discipline is determined by TOPS code which organizes courses for the online course schedule. College Now is excluded.

Select Discipline(s):
Automotive Technology

Select Course Subject:
All

Select Campus:
All

FTE (Full-Time Equivalent): Discipline Compared to COCC

Discipline/Subject

Year	Discipline FTE
1314	160.40
1415	145.02
1516	102.85
1617	95.81
1718	86.37

COCC Overall

Year	COCC FTE
1314	5,927.89
1415	5,230.00
1516	4,731.13
1617	4,462.59
1718	4,264.03
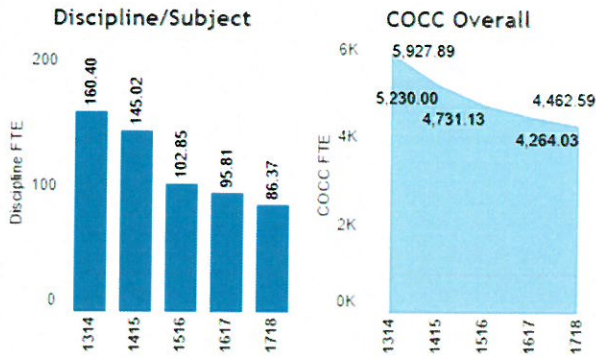
HEADCOUNT: Discipline Compared to COCC

Discipline/Subject

Year	Discipline Headcount
1314	206
1415	208
1516	136
1617	139
1718	112

COCC Overall

Year	Overall Headcount
1314	9,716
1415	9,051
1516	8,391
1617	7,913
1718	7,604
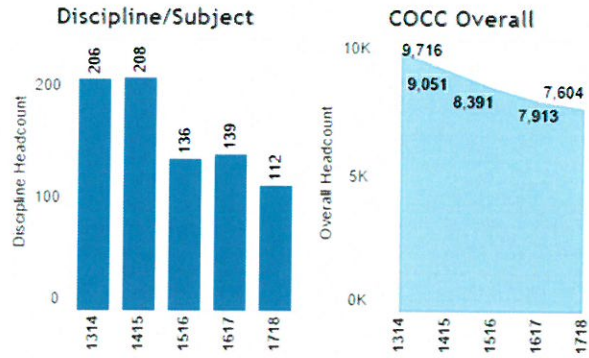
Seats Taken: Number of Seats Taken or Enrollments by Discipline

Year	Seats Taken
1314	1,196
1415	1,039
1516	754
1617	696
1718	646
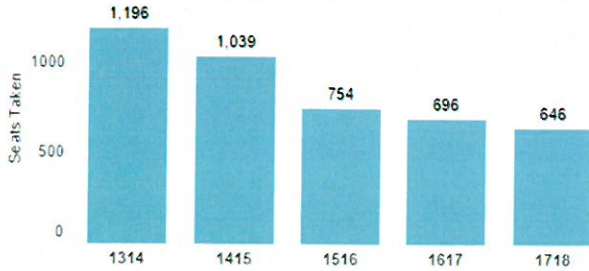
Sections: Number of Course Sections by Discipline

Year	Sections
1314	81
1415	76
1516	61
1617	68
1718	63
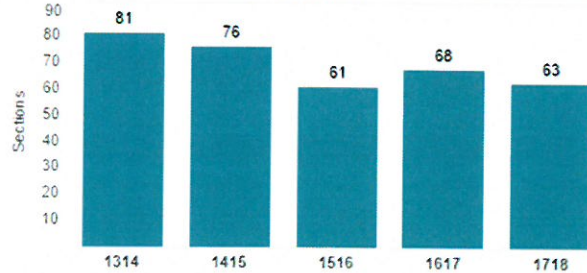
6.c. Student Success

Discipline Course Success Rate Compared to Rest of COCC
Used for Academic Program Review Purposes

Select Discipline:
Automotive Technology

Color Legend:
■ Automotive Technology
■ Rest of COCC

Successful (Grades A,B,C,P)   Drop between 4th and 7th week   Unsuccessful (Grades D,F,W,I,Y)

80.0%   81.7%
78.9%   80.3%

17.4%   17.5%
13.9%   13.3%
6.2%   5.0%
3.6%   2.2%

% of Registrations

Data Table for Chart Above

		Successful (Grades A,B,C,P)					Drop between 4th and 7th week					Unsuccessful (Grades D,F,W,I,Y)				
		2013-14	2014-15	2015-16	2016-17	2017-18	2013-14	2014-15	2015-16	2016-17	2017-18	2013-14	2014-15	2015-16	2016-17	2017-18
Automotive Technology	% Registrations	78.9%	74.0%	81.4%	77.5%	80.3%	3.6%	2.4%	2.8%	2.0%	2.2%	17.4%	23.6%	15.9%	20.4%	17.5%
	Registrations	932	749	590	531	504	43	24	20	14	14	206	239	115	140	110
Rest of COCC	% Registrations	80.0%	80.3%	81.9%	82.0%	81.7%	6.2%	6.1%	5.7%	4.9%	5.0%	13.9%	13.6%	12.4%	13.1%	13.3%
	Registrations	46,994	41,406	37,390	35,313	33,156	3,633	3,142	2,608	2,108	2,050	8,150	6,990	5,683	5,649	5,398

Discipline Course Success for Online, Hybrid, Traditional and Non-Traditional Courses
Used for Academic Program Review Purposes

Select Discipline:
Automotive Technology

Color Legend:
- Automotive Technology
- Rest of COCC

Non-Traditional = Alternative Format, Co-Op Work Experience, Challenge, Independent Study, Learning Communities, Open Entry - Open Exit, Private Lessons, Special Studies

Data Table for Chart Above

			Successful (Grades A,B,C,P)					Drop between 4th and 7th week					Unsuccessful (Grades D,F,W,I,Y)				
			2013-14	2014-15	2015-16	2016-17	2017-18	2013-14	2014-15	2015-16	2016-17	2017-18	2013-14	2014-15	2015-16	2016-17	2017-18
Online	Rest of COCC	% Registrations	70.6%	70.9%	72.0%	74.2%	77.3%	9.9%	10.0%	9.6%	7.6%	7.6%	19.5%	19.1%	18.4%	18.2%	15.1%
		Registrations	3,828	3,914	3,890	4,263	4,904	535	551	521	438	480	1,060	1,054	993	1,043	961
Hybrid	Rest of COCC	% Registrations	83.7%	84.7%	86.1%	84.2%	83.2%	4.8%	5.4%	5.0%	4.2%	4.5%	11.5%	9.9%	8.9%	11.6%	12.4%
		Registrations	1,583	1,491	1,511	1,449	1,884	91	95	87	72	101	218	175	156	199	280
Traditional	Automotive Technology	% Registrations	93.1%	92.4%	94.2%	92.4%	94.5%	1.3%	0.4%	0.5%			5.5%	7.2%	5.3%	7.6%	5.5%
		Registrations	624	447	390	317	358	9	2	2			37	35	22	26	21
	Rest of COCC	% Registrations	80.8%	81.3%	82.9%	83.1%	82.6%	5.8%	5.7%	5.2%	4.5%	4.6%	13.3%	13.0%	11.8%	12.4%	12.8%
		Registrations	40,246	34,609	30,964	28,712	25,560	2,901	2,409	1,953	1,552	1,424	6,640	5,526	4,425	4,278	3,966
Non Traditional	Automotive Technology	% Registrations	60.3%	57.2%	64.3%	62.6%	58.6%	6.7%	4.2%	5.8%	4.1%	5.6%	33.1%	38.6%	29.9%	33.3%	35.7%
		Registrations	308	302	200	214	146	34	22	18	14	14	169	204	93	114	89
	Rest of COCC	% Registrations	79.8%	81.2%	86.8%	83.6%	77.4%	6.3%	5.1%	4.0%	4.3%	4.3%	13.9%	13.7%	9.2%	12.1%	18.3%
		Registrations	1,337	1,392	1,025	889	808	106	87	47	46	45	232	235	109	129	191

Discipline Course Success by Campus
Used for Academic Program Review Purposes

Select Discipline:
Automotive Technology

Color Legend:
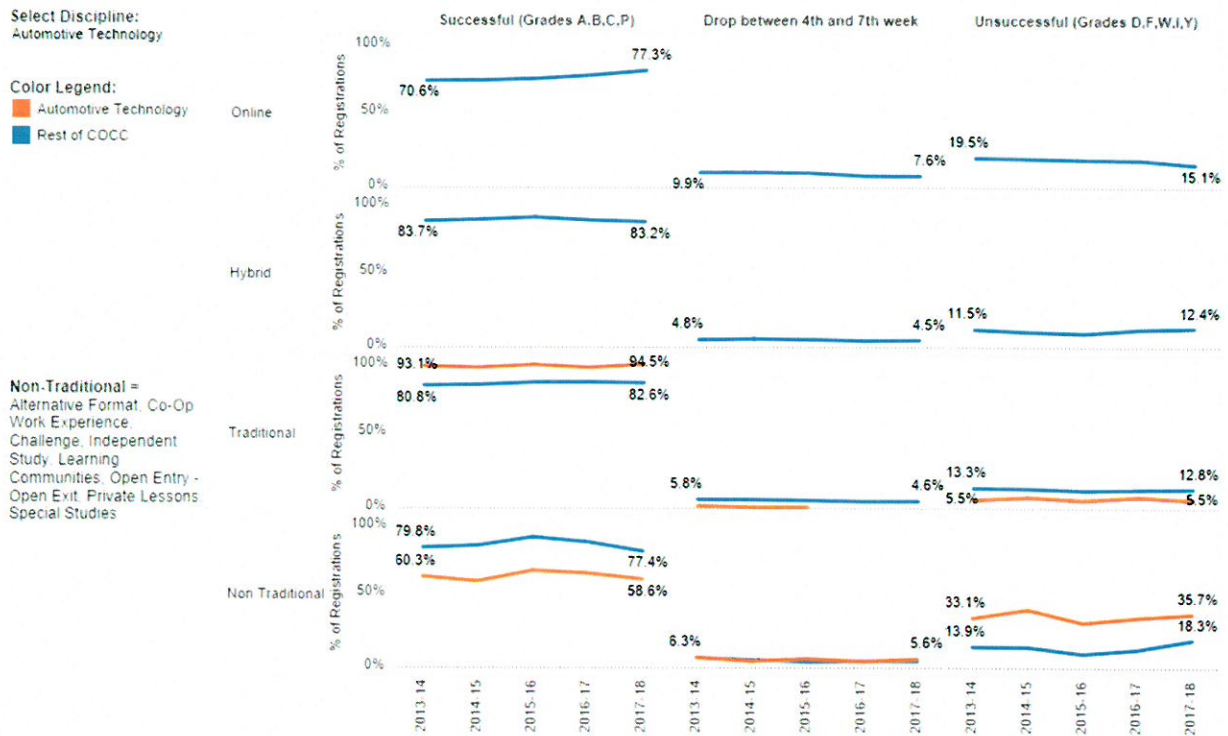- Automotive Technology
- Rest of COCC
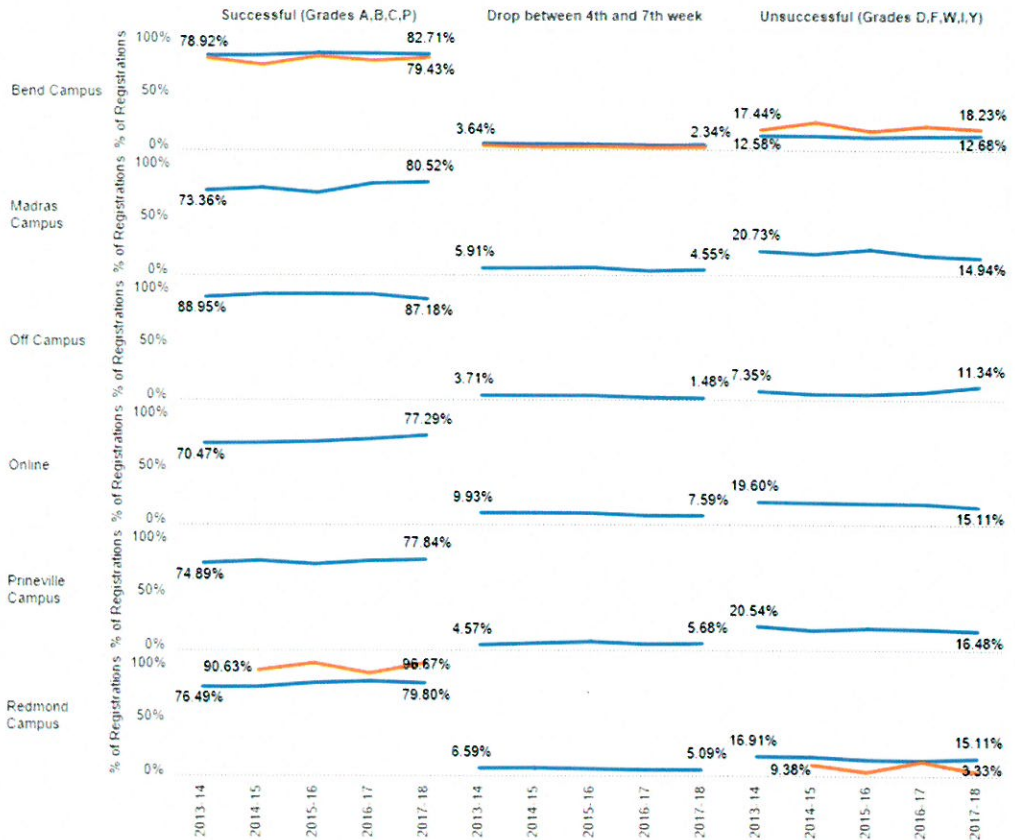
Off Campus =
Any course happening off
the Bend, Madras
Redmond, Prineville
Campuses.

Chart columns: Successful (Grades A,B,C,P) | Drop between 4th and 7th week | Unsuccessful (Grades D,F,W,I,Y)

Rows by campus: Bend Campus, Madras Campus, Off Campus, Online, Prineville Campus, Redmond Campus

Selected chart data labels:
- Bend Campus Successful: 78.92% → 82.71%, 79.43%; Drop: 3.64% → 2.34%; Unsuccessful: 17.44% → 18.23%, 12.58% → 12.68%
- Madras Campus Successful: 73.36% → 80.52%; Drop: 5.91% → 4.55%; Unsuccessful: 20.73% → 14.94%
- Off Campus Successful: 88.95% → 87.18%; Drop: 3.71% → 1.48%; Unsuccessful: 7.35% → 11.34%
- Online Successful: 70.47% → 77.29%; Drop: 9.93% → 7.59%; Unsuccessful: 19.60% → 15.11%
- Prineville Campus Successful: 74.89% → 77.84%; Drop: 4.57% → 5.68%; Unsuccessful: 20.54% → 16.48%
- Redmond Campus Successful: 90.63% → 96.67%, 76.49% → 79.80%; Drop: 6.59% → 5.09%; Unsuccessful: 16.91% → 15.11%, 9.38% → 3.33%

Data Table for Chart Above

			Successful (Grades A,B,C,P)					Drop between 4th and 7th week					Unsuccessful (Grades D,F,W,I,Y)				
			2013-14	2014-15	2015-16	2016-17	2017-18	2013-14	2014-15	2015-16	2016-17	2017-18	2013-14	2014-15	2015-16	2016-17	2017-18
Bend Campus	Automotive Technology	% Registrations	78.9%	73.5%	80.7%	77.0%	79.4%	3.6%	2.4%	2.9%	2.1%	2.3%	17.4%	24.1%	16.4%	20.9%	18.2%
		Registrations	932	720	561	502	475	43	24	20	14	14	206	236	114	136	109
	Rest of COCC	% Registrations	81.6%	81.9%	83.6%	83.3%	82.7%	5.8%	5.5%	5.1%	4.5%	4.6%	12.6%	12.5%	11.3%	12.2%	12.7%
		Registrations	35,221	30,826	28,216	26,114	23,954	2,498	2,075	1,717	1,401	1,335	5,429	4,718	3,829	3,826	3,673
Madras Campus	Rest of COCC	% Registrations	73.4%	75.7%	71.4%	79.5%	80.5%	5.9%	6.1%	6.4%	3.5%	4.5%	20.7%	18.3%	22.2%	16.9%	14.9%
		Registrations	807	637	399	427	372	65	51	36	19	21	228	154	124	91	69
Off Campus	Rest of COCC	% Registrations	88.9%	91.4%	91.6%	91.3%	87.2%	3.7%	3.7%	3.7%	2.0%	1.5%	7.3%	4.9%	4.8%	6.7%	11.3%
		Registrations	1,392	1,471	1,176	864	884	58	59	47	19	15	115	79	61	63	115
Online	Rest of COCC	% Registrations	70.5%	70.8%	71.9%	74.2%	77.3%	9.9%	10.1%	9.7%	7.6%	7.6%	19.6%	19.1%	18.4%	18.2%	15.1%
		Registrations	3,796	3,880	3,854	4,263	4,926	535	552	520	438	484	1,056	1,046	989	1,043	963
Prineville Campus	Rest of COCC	% Registrations	74.9%	76.9%	74.0%	76.9%	77.8%	4.6%	6.0%	7.3%	5.2%	5.7%	20.5%	17.1%	18.7%	18.0%	16.5%
		Registrations	835	550	324	342	274	51	43	32	23	20	229	122	82	80	58
Redmond Campus	Automotive Technology	% Registrations		90.6%	96.7%	87.9%	96.7%							9.4%	3.3%	12.1%	3.3%
		Registrations		29	29	29	29							3	1	4	1
	Rest of COCC	% Registrations	76.5%	76.6%	80.0%	81.4%	79.8%	6.6%	6.9%	6.0%	5.1%	5.1%	16.9%	16.5%	14.0%	13.5%	15.1%
		Registrations	4,943	4,042	3,421	3,303	2,746	426	362	256	208	175	1,093	871	598	546	520

Notes: Non-Credit students do not receive a grade so Successful completion is only determined for credit students

Fall 2015 - Diesel Performance II

SUMMARY DATA FOR DAVID HATA:	Credit Students	All students (CR and NC)
Total Enrolled:	5	6
Male:	4	5
Female:	1	1
Unknown:	0	0
Age 20 - 29:	3	4
Age 30 - 39:	2	2
White:	5	5
Student of Color:	0	1
Unknown:	0	0
Successful Completion (C or better):	5	
Overall Fall Automotive Enrollment:	84	

Winter 2016 - HEV I

SUMMARY DATA FOR DAVID HATA:	Credit Students	All students (CR and NC)
Total Enrolled:	10	10
Male:	7	7
Female:	2	2
Unknown:	1	1
Age 20 - 29:	7	7
Age 30 - 39:	3	3
White:	9	9
Student of Color:	1	1
Unknown:	0	0
Successful Completion (C or better):	10	
Overall Winter Automotive Enrollment:	86	

Winter 2016 - Auto Controller Systems I

SUMMARY DATA FOR DAVID HATA:	Credit Students	All students (CR and NC)
Total Enrolled:	7	7
Male:	6	6
Female:	0	0
Unknown:	1	1
Age 20 - 29:	5	5
Age 30 - 39:	2	2
White:	6	6
Student of Color:	1	1
Unknown:	0	0
Successful Completion (C or better):	7	
Overall WinterAutomotive Enrollment:	86	

Spring 2016 - HEV II

SUMMARY DATA FOR DAVID HATA:	Credit Students	All students (CR and NC)
Total Enrolled:	8	9
Male:	5	6
Female:	2	2
Unknown:	1	1
Age 20 - 29:	5	5
Age 30 - 39:	3	4
White:	7	7
Student of Color:	1	2
Unknown:	0	0
Successful Completion (C or better):	4	
Overall Spring Automotive Enrollment:	79	

Summer 2016 - Auto Controller Systems II

SUMMARY DATA FOR DAVID HATA:	Credit Students	All students (CR and NC)
Total Enrolled:	5	10
Male:	3	6
Female:	1	2
Unknown:	1	1
Age 20 - 29:	3	5
Age 30 - 39:	2	5
White:	5	9
Student of Color:	0	1
Unknown:	0	0
Successful Completion (C or better):	2	
Overall Automotive Enrollment:	33	

Fall 2016 - Diesel Performance II

SUMMARY DATA FOR DAVID HATA:	Credit Students	All students (CR and NC)
Total Enrolled:	9	10
Male:	8	9
Female:	0	0
Unknown:	1	1
Age 20 - 29:	7	7
Age 30 - 39:	0	0
Age 40 - 49:	2	3
White:	7	8
Student of Color:	2	2
Unknown:	0	0
Successful Completion (C or better):	9	
Overall Automotive Enrollment:	77	

Winter 2017 - HEV I

SUMMARY DATA FOR DAVID HATA:	Credit Students	All students (CR and NC)
Total Enrolled:	4	5
Male:	4	5
Female:	0	0
Unknown:	0	0
Age 20 - 29:	3	3
Age 30 - 39:	0	0
Age 40 - 49:	1	2
White:	3	4
Student of Color:	1	1
Unknown:	0	0
Successful Completion (C or better):	4	
Overall Winter Automotive Enrollment:	70	

Winter 2017 - Auto Controller Systems I

SUMMARY DATA FOR DAVID HATA:	Credit Students	All students (CR and NC)
Total Enrolled:	5	5
Male:	4	4
Female:	1	1
Unknown:	0	0
Age 20 - 29:	4	4
Age 30 - 39:	0	0
Age 40 - 49:	1	1
White:	4	4
Student of Color:	1	1
Unknown:	0	0
Successful Completion (C or better):	5	
Overall Winter Automotive Enrollment:	70	

Spring 2017 - HEV II

SUMMARY DATA FOR DAVID HATA:	Credit Students	All students (CR and NC)
Total Enrolled:	6	6
Male:	3	3
Female:	2	2
Unknown:	1	1
Age 20 - 29:	5	5
Age 30 - 39:	0	0
Age 40 - 49:	0	0
White:	6	6
Student of Color:	0	0
Unknown:	0	0
Successful Completion (C or better):	5	
Overall Spring Automotive Enrollment:	64	

Spring 2017 - Auto Controller Systems II

SUMMARY DATA FOR DAVID HATA:	Credit Students	All students (CR and NC)
Total Enrolled:	6	6
Male:	4	4
Female:	1	1
Unknown:	1	1
Age 20 - 29:	5	5
Age 30 - 39:	0	0
Age 40 - 49:	0	0
Age 50+	1	1
White:	5	5
Student of Color:	1	1
Unknown:	0	0
Successful Completion (C or better):	4	
Overall Spring Automotive Enrollment:	64	

Fall 2017 - AUTO 260 - Diesel Performance II

SUMMARY DATA FOR DAVID HATA:	Credit Students	All students (CR and NC)
Total Enrolled:	7 + 1 audit	NC not offered
Male:	8	
Female:	0	
Unknown:	0	
Age 20 - 29:	3	
Age 30 - 39:	2	
Age 40 - 49:	1	
White:	5	
Student of Color:	3	
Unknown:	0	
Successful Completion (C or better):	6 (excludes 1 audit)	
Overall Automotive Enrollment:	81	

Winter 2018 - AUTO 280 - HEV I

SUMMARY DATA FOR DAVID HATA:	Credit Students	All students (CR and NC)
Total Enrolled:	5 + 1 audit	6 +1 audit
Male:	6	7
Female:	0	0
Unknown:	0	0
Age 20 - 29:	3	3
Age 30 - 39:	1	2
Age 40 - 49:	1	1
Age 50+	1 (audit)	1
White:	4	4
Student of Color:	2	2
Unknown:	0	1
Successful Completion (C or better):	5 (excludes 1 audit)	
Overall Fall Automotive Enrollment:	59	

Winter 2018 - AUTO 270 - Auto Controller Systems I

SUMMARY DATA FOR DAVID HATA:	Credit Students	All students (CR and NC)
Total Enrolled:	5 + 1 audit	6 + 1 audit
Male:	6	7
Female:	0	0
Unknown:	0	0
Age 20 - 29:	3	3
Age 30 - 39:	1	1
Age 40 - 49:	1	2
Age 50+	1 (audit)	1
White:	4	5
Student of Color:	2	2
Unknown:	0	0
Successful Completion (C or better):	5 (excludes 1 audit)	
Overall Fall Automotive Enrollment:	59	

Spring 2018 - AUTO 281 - HEV II

SUMMARY DATA FOR DAVID HATA:	Credit Students	All students (CR and NC)
Total Enrolled:	6	7
Male:	6	7
Female:	0	
Unknown:	0	
Age 20 - 29:	3	3
Age 30 - 39:	2	3
Age 40 - 49:	1	1
Age 50+	0	
White:	5	5
Student of Color:	1	2
Unknown:	0	0
Successful Completion (C or better):	6	
Overall Spring Automotive Enrollment:	56	

Spring 2018 - AUTO 271 - Auto Controller Systems II

SUMMARY DATA FOR DAVID HATA:	Credit Students	All students (CR and NC)
Total Enrolled:	7 pus 1 aud	8 + 1 aud
Male:	8	9
Female:	0	0
Unknown:	0	0
Age 20 - 29:	4	4
Age 30 - 39:	2	2
Age 40 - 49:	1	2
Age 50+	1 (audit)	1
White:	7	8
Student of Color:	1	1
Unknown:	0	0
Successful Completion (C or better):	7 (excludes 1 audit)	
Overall Spring Automotive Enrollment:	56	

Headcount of Students Enrolled in Credit and Non-Credit Automotive Courses (excludes College Now, includes Audits)

			Fall 2014	Winter 2015	Spring 2015	Summer 2015	Fall 2015	Winter 2016	Spring 2016	Summer 2016	Fall 2016	Winter 2017	Spring 2017	Summer 2017	Fall 2017	Winter 2018	Spring 2018	Summer 2018	Registered as of 2nd Week Fall 2018	Total Students
Automotive Technology	AUT 101	Basic Electricity-Auto	47	35	19		36	14	11	9	30	24	13	4	34	10	6		33	325
	AUT 102	Automotive Electric I	17		17		6	23			7	7				11	14			102
	AUT 103	Automotive Electric II	17		17		6	19			7	7				9	15			97
	AUT 104	Automotive Electric III		16					30				9				21			76
	AUT 105	Diesel Performance I	14		5				24				20				20			83
	AUT 106	Automotive Program Orientation	57	32	22		39	19	11	10	33	22	13	3	43	13	6		40	363
	AUT 107	Mechanical Systems I	42	30	21		33	17	15	9	29	21	14	4	36	14	6		33	324
	AUT 109	Mechanical Systems II	34	23	15		32	9	9		19	17	14		27	8	5			212
	AUT 110	Small Gas Engines	39	35	22		32	10	12		25	21	15		32	9	6		30	288
	AUT 111	Computerized Engine Controls	12	17			11		17			9	6			6	15			93
	AUT 112	Basic Engine Performance I							18					7			16			41
	AUT 113	Basic Engine Performance II				10				11			13				16			50
	AUT 114	Welding for the Auto Trade		27	14		19	10	12		4	8	6		8	3	6		3	120
	AUT 115	College Success for Automotive																	30	30
	AUT 201	Automotive Engines	13		18		5				17			5	11				15	84
	AUT 202	Manual Drive Trains I	4	13	13		3	6	12		6	7	13		7	7	3		8	102
	AUT 203	Manual Drive Trains II		13				18		5		4				16				56
	AUT 204	Steering and Suspension		18	6			18				16				17				75
	AUT 205	Engine Performance I	19		16		6	20			7	8			6	15				97
	AUT 206	Engine Performance II	7	16			14		13			7	8			9	15			89
	AUT 208	Automotive Brakes	10	13			8				18	7			11				15	82
	AUT 211	ASE Test Prep I	7	1	6		1	4	1		1	3	4							28
	AUT 212	ASE Test Prep II	2		1		1						1						1	6
	AUT 216A	CWE Automotive A	4	5	6	5	1	6	6	4	5	2		5	1	2	1	10	1	64
	AUT 216B	CWE Automotive B	4	5	3	6	2		2	6	3	3	4	4	1	1	3	5		52
	AUT 251	Automatic Transmissions I	5	12	14		5	2	10		4	8	11		4	6	6		5	92
	AUT 253	Automotive Air Conditioning				21				13			10					16		60
	AUT 256	Automatic Transmissions II			14	14			10				14				13			65
	AUT 260	Diesel Performance II	7				5				9				8					29
	AUT 270	Auto Controller Systems I		4				7				5				6			12	34
	AUT 271	Auto Controller Systems II			5				5			6				8				24
	AUT 280	Hybrid Electric Vehicles I		9				10				4				6			11	40
	AUT 281	Hybrid Electric Vehicles II			8			8				6				6				28
Non-Credit Automotive	0.801B	Automotive Controller Systems			1											1	1			3
		Automotive Custom Tuning								4										4
		Diesel Performance II					1				1									2
		Hybrid Electric Vehicles I		1								1				1				3
		Hybrid Electric Vehicles II							1								1			2
		Totals	361	325	263	56	266	212	222	76	225	211	190	42	249	179	180	31	237	3325