OAKLAND COMMUNITY COLLEGE

AUBURN HILLS CAMPUS

NEW ACCELERATED

AUTO SERVICING CERTIFICATE

DAY PROGRAM ONLY

COMPLETE IN 30 WEEKS

START

5/5/08	Summer I 08	ATA 1300	M/W 8 AM – 1 PM
5/6/08		ATA 1200	T/TH 8 AM – 1 PM
6/30/08	Summer II 08	ATA 1800	M/W 8 AM – 1 PM
7/1/08		ATA 1100	T/TH 8 AM – 1 PM
9/3/08	Fall I 08	ATA 1400	M/W 8 AM – 1 PM
8/28/08		ATA 1500	T/TH 8 AM – 1 PM
10/27/08	Fall II 08	ATA 1600	M/W 8 AM – 1 PM
10/21/08		ATA 1700	T/TH 8 AM – 1 PM
1/12/09	WINTER I 09	ATA 1300	M/W 8 AM – 1 PM
1/13/09		ATA 1200	T/TH 8 AM – 1 PM
3/16/09	WINTER II 09	ATA 1800	M/W 8 AM – 1 PM
3/12/09		ATA 1100	T/TH 8 AM – 1 PM
5/11/09	SUMMER I 09	ATA 1400	M/W 8 AM – 1 PM
5/12/09		ATA 1500	T/TH 8 AM – 1 PM
7/6/09	SUMMER II 09	ATA 1600	M/W 8 AM – 1 PM
7/7/09		ATA 1700	T/TH 8 AM – 1 PM

Developed by: Professor Harry A. Hildebrandt

3/25/08 248.232.4204 (work) 313.618.5922 (cell)

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OAKLAND
COMMUNITY
COLLEGE®

WELCOME TO THE CURRICULUM REVIEW SELF-STUDY PROCESS

Discipline/Program Automotive Servicing Coordinator(s) Prof. Harry A. Hildebrandt

CRC Mentor Gail Mays Review Date: June 6, 2008

Thank you for agreeing to coordinate the Curriculum Review in your area. As Discipline/Program Case Review Coordinator, it is your responsibility to make sure the steps detailed below are completed by the Review Date. Your packet includes instructions and forms for completing the Review. If needed, a CRC mentor is available to you. Your Dean will also be able to provide meaningful assistance in completing this important task.

In the Part I-Core Review, the College asks your discipline/program to analyze its curriculum from a variety of perspectives. These include course offerings and contents, enrollment/retention, transfer trends, and plans for the future. An additional section of activities is contained in Part II. The nature of these review activities will depend on whether you are a member of a Discipline or a Program.

Included in this document to help you work on your review are: 1) Data Collection forms to distribute to your Discipline/Program Case colleagues and 2) Data Analysis forms with summary sections. Allow two to three months for this work. Please send all completed forms to the Chair of CRC 3 weeks prior to your scheduled review.

Once again, thank you for agreeing to work on this very important process with your colleagues. Together we will constantly strive to ensure the excellence of instruction at OCC.

College Curriculum Review Membership
2007-2008

Imagene Bailey (OR)
Thomas Boozer (AH)
Nadia Boulos (HL)
Beverly Stanbrough (RO/SF)
Diane Hill (OR)
Tony Ingram (OR)
Darlene Levinson (OR)
David Mathews (RO
Janet Peart (AH)
Letyna Roberts (ex-officio)
Gail Mays (AH)-Chair

CURRICULUM REVIEW SELF-STUDY PROCESS FOR DISCIPLINE/PROGRAM COORDINATORS

Coordinator: The bold type below indicates forms that are attached and also available on the P drive. Check off steps as completed.

- [x] **Step 1**—Request that the Office of Assessment & Effectiveness (contact information available on InfoMart) to send you the Dashboard data for your Discipline/Program.
- [x] **Step 2**—If you are an occupational program coordinator, distribute the **PROE surveys** to faculty, students, and advisory committees. Return completed surveys to the OCC's Office of State and Federal Programs 6 weeks before your scheduled review.
- [x] **Step 3**—Send the **Data Collection forms** to all the full-time faculty and/or adjunct members of your Discipline/Program, as specified on each form.
- [x] **Step 4**—Collect syllabi from all adjuncts and full-time faculty for every course they are teaching, and complete the **Data Collection forms** for each course.
- [x] **Step 5**—After collecting the above data, complete the **Data Analysis forms** to help you organize and analyze the information you've gathered.
- [x] **Step 6**— Complete the Curriculum Review Report by compiling the **Data Analysis** forms
- [ ] **Step 7**—Forward a DRAFT copy of your compiled Discipline/Program Curriculum Review Report along with a **Faculty Sign-off form** to all faculty participating in the review at least 6 weeks prior to your review appointment. NOTE: As part of the official CRC Review Document, please include the returned Faculty Sign-Off forms.
- [ ] **Step 8**—Send a completed hard copy of all completed forms (including the **Data Collection, Data Analysis forms**) to the Chairperson of the Curriculum Review Committee at least 3 weeks prior to your review, along with enough copies of your completed report for each committee member. The Chairperson will distribute them.
- [ ] **Step 9**—Present the Discipline/Program Self-Study to the Curriculum Review Committee on the appointed date.

The Curriculum Review Committee will then provide your Discipline/Program with recommendations and suggestions and share the results of your review with the College Academic Senate, Vice-Chancellor of Academic and Student Services, and the Office of Assessment & Effectiveness.

CRC
PART I-CORE REVIEW

Coordinator: Data Collection and Data Analysis forms for the following review areas are attached. Please also attach a copy of your program requirements from the catalog and all course descriptions.

A. CATALOG COURSE DESCRIPTIONS

- Please reproduce copies of all your Discipline/Program catalog course descriptions, and distribute them to the full-time members of the Discipline/Program with the Data Collection form asking the faculty to comment on whether the catalog course descriptions are accurate, clear, and current.
- Analyze the responses in order to determine where there is a need for revision.

B. SYLLABUS REVIEW

- Collect syllabi from all full-time and adjunct faculty for every section of each courses listed in the catalog under your Discipline/Program.
- Analyze where there are inconsistencies or omissions in the syllabi.

C. ENROLLMENT TRENDS AND STUDENT RETENTION

- Collect the Dashboard enrollment and retention data for the current and last academic year (available from the Office of Assessment & Effectiveness).
- Analyze areas of strength and weakness. Discuss, where applicable, student recruitment and student retention strategies that your Discipline/Program participates in currently or intends to implement in the future.

D. DISCLIPLINE/PROGRAM NEEDS AND RESOURCES

- Collect information on the Discipline/Program's current and anticipated needs and resources by distributing the Data Collection form to all full and adjunct faculty.
- Discuss what resources and staff development activities your Discipline/Program needs and also indicate necessary curriculum changes/revisions where appropriate.

(AUT) AUTOMOTIVE TECHNOLOGY

AUT 1110 ..... 4 Credits
Automotive Fundamentals

The students will identify major automotive systems, components, and tools. They will discuss automotive systems, components and tools using a standard automotive technical terminology. Development of the ability to efficiently use standard automotive tools and equipment will be emphasized during performance of basic automotive servicing procedures. Students will participate in a discussion of various automotive employment opportunities and analyze the job entry requirements for each. Course fee.

AUT 2120 ..... 4 Credits
Auto Fuel and Emission Systems

The students will identify and describe the operation of both fuel and emission system components. They will disassemble, clean, inspect, assemble and adjust fuel injectors. They will perform tests of vehicle emissions and service procedures that improve vehicle emission system performance or meet government emission system standards. Course fee.

AUT 2300 ..... 4 Credits
Computerized Automotive Systems

Prerequisite: AUT 1120 and AUT 2120 or ATA 130 and ATA 150 or consent of instructor.

The student will practice job entry skills in diagnosis and repair of vehicle electronic systems. Current computerized fuel injection, turbocharging, ignition, and other electronic systems will be featured. Work experience in removal, replacement and adjustment of components will be provided by assignment of malfunctioning vehicles to students. Course fee.

(ATA) AUTOMOBILE SERVICING

ATA 1100 ..... 4 Credits
Brake System Service

The student will develop the skills required to properly service the hydraulic brake system. Utilization of hands-on training and work experience on licensed vehicles developing saleable skills on the job entry-level. The student will rebuild or renew all components of current major automotive manufacturers' brake systems with an emphasis on safe and proper work habits and procedures. Course/lab fees.

ATA 1200 ..... 4 Credits
Front Suspension and Steering Service

The student will develop the skills required to properly service the front suspension and steering system of current model vehicles. A great portion of class time will be spent in the lab rebuilding or renewing all components of the suspension and steering systems. Wheel alignment measurement and correction will be performed by all students on all major automotive equipment, with an emphasis on safe and proper work habits and procedures. Course/lab fees.

ATA 1300 ..... 4 Credits
Automotive Electrical Systems Servicing

The student will develop the skills required to service the battery, cranking system, charging system and electrical accessories systems of all current major automobile manufacturers' vehicles. Theory of the systems as well as hands-on training will provide job entry-level skills for the student. Current manufacturers' specifications as well as safe and proper work habits and procedures will be emphasized. Course/lab fees.

ATA 1400 ..... 4 Credits
Engine Support Systems Servicing

General Education Attributes 3, 4, 7

The student will develop the skills required to properly service the engine fuel, lubrication, cooling, exhaust and valve systems. A great portion of the class time will be spent in the laboratory performing tests, as well as repairing and renewing major components of the above named systems. The student will make adjustments and replace components in accordance with manufacturers' specifications, with a major emphasis on developing safe and proper work habits and techniques. Course/lab fees.

ATA 1500 ..... 4 Credits
Engine Tune-Up and Emissions Service

General Education Attributes 3, 7, 10

The student will develop the skills required to properly tune an engine and diagnose the amount of emissions the engine produces. The student will also calibrate, make adjustments and renew or replace components of the ignition and emission systems in accordance with the manufacturers' specifications. Current ignition analysis equipment as well as infrared and other emissions measuring devices and equipment will be used in a safe and proper manner. Course/lab fees.

ATA 1600 ..... 4 Credits
Automatic Transmission Minor Servicing

The student will develop the skills required to perform service operations on all current major automobile manufacturers' automatic transmissions. A major portion of the class time will be spent in the laboratory performing tests, making adjustments, renewing or replacing various components of the transmissions. Manufacturers' specifications and procedures as well as safe and proper work habits will be greatly emphasized. Course/lab fees.

ATA 1700 ..... 4 Credits
Manual Transmissions and Rear Axle Servicing

The student will develop the skills required to service all current major automobile manufacturers' manual transmissions and rear axles. Servicing procedures will include diagnosis, removal and replacement and rebuilding of the clutch, transmission, driveshaft and the rear axle. Manufacturers' specifications and procedures as well as safe and proper work habits will be emphasized. Course/lab fees.

ATA 1800 ..... 4 Credits
Automotive Air Conditioning and Heating Service

The student will develop the skills required to service all major automobile manufacturers' current model heating and air conditioning systems. Theory of the systems as well as work experience on licensed vehicles will be included. The student will develop entry-level job skills in diagnosing and repairing malfunctions in the systems, with an emphasis on safe and proper work habits and procedures. Course/lab fees.

DATA ANALYSIS

CORE REVIEW

A. CATALOG COURSE DESCRIPTION

Coordinator: Complete this form after reviewing the Catalog Course Data Collection forms from members of your Discipline/Program on all of the courses listed in the Catalog. Please also attach a photocopy of all program requirements and course descriptions in the catalogue.

List every course that is listed in the catalog. Check where revision is indicated or no revisions seem necessary. Please, add lines where needed.

	Revision needed	No Revision necessary
Course Number ATA 1100	____	X
Course Number ATA 1200	____	X
Course Number ATA 1300	X	____
Course Number ATA 1400	____	X
Course Number ATA 1500	X	____
Course Number ATA 1600	X	____
Course Number ATA 1700	____	X
Course Number ATA 1800	X	____
Course Number _____	____	____
Course Number _____	____	____

CATALOG COURSE DESCRIPTION REVIEW SUMMARY:

DATA COLLECTION

CORE REVIEW

A. CATALOG COURSE DESCRIPTION

FOR: ATA 1100
Course Number

Coordinator: Distribute this form to all full-time members of the discipline/program for every course listed in the catalog.

CATALOG COURSE DESCRIPTION:

	Yes	No
Accurate	☑	☐
Clear	☑	☐
Current	☑	☐
NUMBER OF CREDITS Appropriate	☑	☐

Please explain any NO answer:

*Please return to*_____ *at* _____ *by*_____.
Name Campus Date

DATA COLLECTION

CORE REVIEW

A. CATALOG COURSE DESCRIPTION

FOR: ATA 1200
Course Number

Coordinator: Distribute this form to all full-time members of the discipline/program for every course listed in the catalog.

CATALOG COURSE DESCRIPTION:

	Yes	No
Accurate	☑	☐
Clear	☑	☐
Current	☑	☐
NUMBER OF CREDITS Appropriate	☑	☐

Please explain any NO answer:

Please return to _____ *at* _____ *by* _____.
Name Campus Date

DATA COLLECTION

CORE REVIEW

A. CATALOG COURSE DESCRIPTION

FOR: ATA 1300
Course Number

Coordinator: Distribute this form to all full-time members of the discipline/program for every course listed in the catalog.

CATALOG COURSE DESCRIPTION:

	Yes	No
Accurate	☐	☑
Clear	☐	☑
Current	☐	☑
NUMBER OF CREDITS Appropriate	☑	☐

Please explain any NO answer:

SEE NEXT PAGE

*Please return to*_____ *at* _____ *by*_____.
Name Campus Date

OAKLAND
COMMUNITY
COLLEGE

SYLLABUS
Automotive - Diesel Truck & Hybrid Systems
Electrical Service
ATA-1300
Room A – 203

Monday & Wednesday
Summer I 2008

ATA 1300 ..... 4 Credits
Automotive Electrical Systems Servicing

The student will develop the skills required to service the battery, cranking system, charging system and electrical accessories systems of all current major automobile manufacturers' vehicles. Theory of the systems as well as hands-on training will provide job entry-level skills for the student. Current manufacturers' specifications as well as safe and proper work habits and procedures will be emphasized. Course/lab fees.

DAY & THURSDAY

CATALOG COURSE DESCRIPTION:

THE STUDENT WILL DEVELOP THE SKILLS REQUIRED TO SERVICE THE 12-24-42-300 VOLT BATTERY CRANKING AND CHARGING SYSTEMS AND ELECTRICAL ACCESSORIES SYSTEMS FOR ALL CURRENT MAJOR AUTOMOBILES, TRUCKS, HYBRIDS, AND RECREATIONAL VEHICLES. THEORY OF THE SYSTEM AS WELL AS HANDS-ON TRAINING WILL PROVIDE JOB ENTRY LEVEL SKILLS FOR THE STUDENTS. CURRENT MANUFACTURERS' SPECIFICATIONS AS WELL AS SAFE AND PROPER WORK HABITS AND PROCEDURES WILL BE EMPHASIZED. COURSE/LAB FEE.

COURSE GOALS:

All courses in the ATA Program are competency-based (C.B.) designed to accommodate two major objectives:

1) To provide you, the student, with the necessary knowledge of Motor Vehicle theory (testing and diagnosis), and proper repair procedures necessary to qualify you for an entry-level position in the Motor Vehicle Servicing or Engineering Technician industry.

2) To prepare you for successful accomplishment of a licensing test, which is required for all auto mechanics, by law, in the State of Michigan.

You must successfully complete a Safety Test before starting work. You will not be allowed to work in the lab if you are not wearing your safety glasses. Your safety glasses must be worn while procuring tools from the crib and any time you are in the lab. Tools will not be distributed unless you have your safety glasses on.

DATA COLLECTION

CORE REVIEW

A. CATALOG COURSE DESCRIPTION

FOR: ATA 1400
Course Number

Coordinator: Distribute this form to all full-time members of the discipline/program for every course listed in the catalog.

CATALOG COURSE DESCRIPTION:

	Yes	No
Accurate	☑	☐
Clear	☑	☐
Current	☑	☐
NUMBER OF CREDITS Appropriate	☑	☐

Please explain any NO answer:

*Please return to*_____ *at* _____ *by*_____.
Name Campus Date

DATA COLLECTION

_ ORE REVIEW

A. CATALOG COURSE DESCRIPTION

FOR: ATA 1500
Course Number

Coordinator: Distribute this form to all full-time members of the discipline/program for every course listed in the catalog.

CATALOG COURSE DESCRIPTION:

	Yes	No
Accurate	☐	☑
Clear	☐	☑
Current	☐	☑
NUMBER OF CREDITS Appropriate	☑	☐

Please explain any NO answer:

SEE NEXT PAGE

*Please return to*_____ *at*_____ *by*_____.
Name Campus Date

OAKLAND
COMMUNITY
COLLEGE

SYLLABUS
Driveability & Emission Service
ATA-1500
Room A – 203

Monday & Wednesday
Summer I 2008

ATA 1500 ..... 4 Credits
Engine Tune-Up and Emissions Service
General Education Attributes 3, 7, 10
The student will develop the skills required to properly tune an engine and diagnose the amount of emissions the engine produces. The student will also calibrate, make adjustments and renew or replace components of the ignition and emission systems in accordance with the manufacturers' specifications. Current ignition analysis equipment as well as infrared and other emissions measuring devices and equipment will be used in a safe and proper manner. Course/lab fees.

)N TUESDAY & THURSDAY

108
8

CATALOG COURSE DESCRIPTION:

THE STUDENT WILL DEVELOP THE SKILLS REQUIRED TO PROPERLY TROUBLESHOOT AND ANALYZE DRIVEABILITY AND EMISSION PROBLEMS RELATED TO PERFORMANCE, GAS MILEAGE, AND CATALYTIC CONVERTER EFFICIENCY. THE STUDENT WILL ALSO CALIBRATE, MAKE ADJUSTMENTS, AND RENEW OR REPLACE COMPONENTS OF THE IGNITION AND FUEL SYSTEM IN ACCORDANCE WITH THE MANUFACTURERS' SPECIFICATIONS. CURRENT SCAN TOOLS, LAPTOPS, AND IGNITION ANALYZER EQUIPMENT WILL BE USED AS WELL AS INFRARED AND OTHER EMISSION MEASURING DEVICES. MANUFACTURERS' SPECIFICATIONS AND PROCEDURES AS WELL AS SAFETY AND PROPER WORK HABITS WILL BE GREATLY EMPHASIZED. COURSE/LAB FEE.

COURSE GOALS:

All courses in the ATA Program are competency-based (C.B.) designed to accommodate two major objectives:

1) To provide you, the student, with the necessary knowledge of Motor Vehicle theory (testing and diagnosis), and proper repair procedures necessary to qualify you for an entry-level position in the Motor Vehicle Servicing or Engineering Technician industry.
2) To prepare you for successful accomplishment of a licensing test, which is required for all auto mechanics, by law, in the State of Michigan.

You must successfully complete a Safety Test before starting work. You will not be allowed to work in the lab if you are not wearing your safety glasses. Your safety glasses must be worn while procuring tools from the crib and any time you are in the lab. Tools will not be distributed unless you have your safety glasses on.

DATA COLLECTION

CORE REVIEW

A. CATALOG COURSE DESCRIPTION

FOR: ATA 1600
Course Number

Coordinator: Distribute this form to all full-time members of the discipline/program for every course listed in the catalog.

CATALOG COURSE DESCRIPTION:

	Yes	No
Accurate	☐	☑
Clear	☐	☑
Current	☐	☑
NUMBER OF CREDITS Appropriate	☑	☐

Please explain any NO answer:

SEE NEXT PAGE

*Please return to*_____ *at*_____ *by*_____.
Name Campus Date

OAKLAND
COMMUNITY
COLLEGE

SYLLABUS
Automatic Transmission Rebuilding
ATA-1600
Room A – 203

Mondays
Winter 2008

ATA 1600 ..... 4 Credits
Automatic Transmission Minor Servicing
The student will develop the skills required to perform service operations on all current major automobile manufacturers' automatic transmissions. A major portion of the class time will be spent in the laboratory performing tests, making adjustments, renewing or replacing various components of the transmissions. Manufacturers' specifications and procedures as well as safe and proper work habits will be greatly emphasized. Course/lab fees.

ON TUESDAY & THURSDAY

4108
18

CATALOG COURSE DESCRIPTION:

THE STUDENT WILL DEVELOP THE SKILLS REQUIRED TO PERFORM REBUILDING OPERATIONS ON HYDROMECHANICAL, ELECTROHYDROMECHANICAL, AND CONSTANT VARIABLE TORQUE TRANSMISSIONS. A PORTION OF CLASS TIME WILL BE SPENT IN THE LAB PERFORMING DIAGNOSTIC TESTS, MAKING ADJUSTMENTS, RENEWING OR REPLACING VARIOUS COMPONENTS, AND REMOVING AND INSTALLING TRANSMISSIONS AND TRANSAXLES FROM VEHICLES. MANUFACTURERS SPECIFICATIONS' AND PROCEDURES AS WELL AS SAFE AND PROPER WORK HABITS WILL BE GREATLY EMPHASIZED. COURSE/LAB FEE.

COURSE GOALS:

All courses in the ATA Program are competency-based (C.B.) designed to accommodate two major objectives:

1) To provide you, the student, with the necessary knowledge of Motor Vehicle theory (testing and diagnosis), and proper repair procedures necessary to qualify you for an entry-level position in the Motor Vehicle Servicing or Engineering Technician industry.
2) To prepare you for successful accomplishment of a licensing test, which is required for all auto mechanics, by law, in the State of Michigan.

You must successfully complete a Safety Test before starting work. You will not be allowed to work in the lab if you are not wearing your safety glasses. Your safety glasses must be worn while procuring tools from the crib and any time you are in the lab. Tools will not be distributed unless you have your safety glasses on.

DATA COLLECTION

ORE REVIEW

A. CATALOG COURSE DESCRIPTION

FOR: ATA 1700
Course Number

Coordinator: Distribute this form to all full-time members of the discipline/program for every course listed in the catalog.

CATALOG COURSE DESCRIPTION:

	Yes	No
Accurate	☑	☐
Clear	☑	☐
Current	☑	☐
NUMBER OF CREDITS Appropriate	☑	☐

Please explain any NO answer:

*Please return to*_____ *at* _____ *by*_____.
Name Campus Date

DATA COLLECTION

_ORE REVIEW

A. CATALOG COURSE DESCRIPTION

FOR: ATA 1800
Course Number

Coordinator: Distribute this form to all full-time members of the discipline/program for every course listed in the catalog.

CATALOG COURSE DESCRIPTION:

	Yes	No
Accurate	☐	☑
Clear	☐	☑
Current	☐	☑
NUMBER OF CREDITS Appropriate	☑	☐

Please explain any NO answer:

SEE NEXT PAGE

*Please return to*_____ *at*_____ *by*_____.
Name Campus Date

OAKLAND
COMMUNITY
COLLEGE

SYLLABUS
Automotive & Recreational Vehicle HVAC
ATA-1800
Room A – 203

Monday & Wednesday
Summer II 2008

INSTRUCTOR –

ATA 1800 ..... 4 Credits
Automotive Air Conditioning and Heating Service

The student will develop the skills required to service all major automobile manufacturers' current model heating and air conditioning systems. Theory of the systems as well as work experience on licensed vehicles will be included. The student will develop entry-level job skills in diagnosing and repairing malfunctions in the systems, with an emphasis on safe and proper work habits and procedures. Course/lab fees.

Y & THURSDAY

CATALOG COURSE DESCRIPTION:

THE STUDENT WILL DEVELOP THE SKILLS REQUIRED TO SERVICE ALL MAJOR AUTOMOTIVE AND RECREATIONAL VEHICLES, REFRIGERATED TRANSPORT UNITS, AND ALL MOTOR VEHICLE MANUFACTURERS' CURRENT MODEL HEATING, AIR CONDITIONING, AND MOBILE REFRIGERATION SYSTEMS. THEORY OF THE SYSTEMS AS WELL AS WORK EXPERIENCE ON HVAC AND REFRIGERATION SYSTEMS WILL BE INCLUDED. THE STUDENTS WILL DEVELOP ENTRY LEVEL JOB SKILLS IN DIAGNOSING AND REPAIRING MALFUNCTIONS IN THE SYSTEMS WITH AN EMPHASIS ON SAFETY. MANUFACTURERS SPECIFICATIONS' AND PROCEDURES AS WELL AS SAFE AND PROPER WORK HABITS WILL BE GREATLY EMPHASIZED. COURSE/LAB FEE.

COURSE GOALS:

All courses in the ATA Program are competency-based (C.B.) designed to accommodate two major objectives:

1) To provide you, the student, with the necessary knowledge of Motor Vehicle theory (testing and diagnosis), and proper repair procedures necessary to qualify you for an entry-level position in the Motor Vehicle Servicing or Engineering Technician industry.
2) To prepare you for successful accomplishment of a licensing test, which is required for all auto mechanics, by law, in the State of Michigan.

You must successfully complete a Safety Test before starting work. You will not be allowed to work in the lab if you are not wearing your safety glasses. Your safety glasses must be worn while procuring tools from the crib and any time you are in the lab. Tools will not be distributed unless you have your safety glasses on.

DATA COLLECTION

ORE REVIEW

B. SYLLABUS REVIEW

FOR: ATA 1100-1800

Course Number

Coordinator: Ask all full-time and adjunct faculty to send you the syllabi for all of their courses by a given date. Use this form to collect information about their syllabi.

INSTRUCTORS ⇨	All	Instructors	Use	The	Same	College	Criteria		
Mandatory Items (per FMA and Federal Law)									
ADA Notification	X								
Course Goals	X								
Grading Standards and Practices	X								
Tentative Schedule of Assignments and Tests	X								
Recommended Items (per Academic Senate)									
Course Name and Number	X								
Instructor, Office Location, Method of Contact	X								
Office Hours	X								
Available Assistance	X								
Course Catalog Description with Prerequisites	X								
General Education Attributes (where pertinent)	X								
Required Books and Supplies	X								
List of Supportive Materials (where available)	X								
Evaluation/Testing System & Policies	X								
Attendance Policy	X								
Safety Instructions	X								
Disclaimer Allowing for Reasonable Revisions	X								
Optional Items									
Semester Meeting Times & Room	X								
Teaching/Learning Strategies	X								
Applicable Forms Pertinent to Course	X								
Reference to Student Policies in OCC Catalog	X								
Policy on Use of Computing Resources	X								
Description of Required Computing Skills	X								
Policy on Plagiarism									
Student Bill of Responsibilities									

DATA ANALYSIS

CORE REVIEW

B. SYLLABUS REVIEW, *(CONTINUED)*

Coordinator: After reviewing the Data Analysis forms on all the courses in the Discipline/Program, please summarize your analysis of whether or not there are course syllabi in your Discipline/Program that need revision due to inconsistencies or omissions, or other issues.

SYLLABUS REVIEW SUMMARY:

Changes need to be made for the following courses:

ATA 1300	**Course Title and Description**
ATA 1500	**Course Title**
ATA 1600	**Course Title and Description**
ATA 1800	**Course Title and Description**

DATA ANALYSIS

CORE REVIEW

C. ENROLLMENT TRENDS AND STUDENT RETENTION

Coordinator: The Dashboard report on your Discipline/Program will collect the necessary data in regard to Enrollment Trends and Student Retention. Use this form to review that data in the following areas. Please also attach Dashboard Data.

Enrollment (Use the Dashboard data on Average Section Size, Sections Filled to Capacity, Percent of Completed Sections, Percent Change in Headcount, and Percent Change in Credit Hours to discuss this area.)

See Tab 9.

Minority Students (Use the Dashboard data on Minority Students to discuss this area.)

See Tab 9.

Student and Course Success (Use the Dashboard data on Percent of Withdrawals, Percent of Incompletes, and Student Course Completion Rate to discuss this area.)

See Tab 9.

ENROLLMENT TRENDS AND STUDENT RETENTION REVIEW SUMMARY:

DATA COLLECTION

CORE REVIEW

D. DISCIPLINE/PROGRAM NEEDS AND RESOURCES

Coordinator: Distribute this form to all full-time and adjunct faculty.

What resources or services does the Discipline/Program need in order to improve instruction? Please explain the reason you are requesting each resource.

Automotive Servicing has been waiting for several years for a Chassis Dynamometer to replace the one that was removed several years ago.

Automotive Servicing needs an additional paraprofessional to work on the shop floor during class times. (Note: This would bring our number to two, instead of the current one paraprofessional. Ten years ago, there were three paraprofessionals.)

Automotive Servicing needs fifteen (15) laptop computers, a wireless laboratory, and diagnostic software, plus state-of-the-art scan tools through 2007 year vehicles.

What curriculum revisions or development would enhance instruction in your Discipline/Program?

Remove EEC 102	DC Fundamentals	3 credit hours	from our current curriculum.
Replace it with APP 217	Applied Technology	4 credits.	

Please return to _____ ***at*** _____ ***by*** _____.
Name Campus Date

DATA ANALYSIS

E. INPUT FROM INTERNAL & EXTERNAL COMMUNITY

Coordinator: After reviewing the Data Collection forms on all the courses in the Program, along with the collated data summary, please analyze and summarize these findings.

Faculty Perceptions of Occupational Programs Analysis

See Tab 14.

Student Perception of Occupational Programs Analysis

See Tab 13.

Advisory Committee/Industry Perceptions of Occupational Programs Analysis

See Tab 12.

INPUT FROM THE INTERNAL AND EXTERNAL COMMUNITY REVIEW SUMMARY

DATA COLLECTION

F. COMPARABLE COURSES/PROGRAMS AND TRENDS

Coordinator: Answer the following questions.

1. List three institutions to which the courses in your Program transfer, and list the specific courses for each institution. (Consult with the Counseling Department)

   Ferris State University
   Lawrence Technological University
   Wayne State University
   All Community Colleges

2. List the institutions with which articulation agreements exist that include the courses in your Program. (Consult with the Counseling Department)

   None

3. Provide information regarding labor market trends in your field. (Consult with the Office of Assessment & Effectiveness)

   Part 6 Report Supporting the Review of the Automotive Servicing Program

   See Tab 10.

4. Identify changes in job performance and employer expectations that have occurred within your industry in the past 5 years. (Consult with advisory committees, professional organizations)

   No Significant Changes.

   Part 7 Report Supporting the Review of the Automotive Servicing Program

   See Tab 11.

DATA ANALYSIS

G. COMPARABLE COURSES/PROGRAMS AND TRENDS

Coordinator: Please use the data from the Comparable Courses/Programs and Trends Data Collection form to answer the following questions:

1. Discuss how does your program serves transferring students.

   All of the ATA courses are accepted at the colleges to which the students transfer.

2. Discuss the program's current articulation agreements. If your program does not transfer, discuss how the courses and/or program serve our students.

   No articulation agreements.

3. Discuss employment opportunities for students in both the current and future job market.

   Opportunities are excellent because this profession cannot be performed overseas or in any other foreign countries. These jobs will stay in America.

4. Discuss the changes that will be made in your program in response to current/future employer expectations and market trends.

   Special Certificates to provide areas of specialization in Driveability, Transmissions, Tires and Brakes, Diesel and Heavy Equipment, Engineering Physical Test, and Hybrids.

COMPARABLE COURSES/PROGRAMS AND TRANSFER REVIEW SUMMARY:

DATA ANALYSIS

H. OUTCOMES ASSESSMENT

Coordinator: Complete this form after reviewing your most recent Program Assessment Plan. Obtain the most recent copy of your Program Assessment Plan from the Office of Assessment & Effectiveness. Please attach it your review.

1. How have you used the findings from your Program Assessment to improve your program?

   The outcomes are meeting the benchmarks.

2. What revisions to your Program Assessment Plan would you suggest?

   None.

3. Discuss the SAGE findings that apply to the instruction in your Program. Obtain these findings from the Office of Assessment & Effectiveness.

OUTCOMES ASSESSMENT REVIEW SUMMARY:

OAKLAND
COMMUNITY
COLLEGE

SYLLABUS
Brake System Service ATA – 1100
Room A – 201
Section # A1501
Wednesday 5pm – 9:55pm
Winter 2008

INSTRUCTOR: Joseph M. Burdzinski
OFFICE: M-TEC 140
PHONE: (248) 232-4177
EMAIL: JMBURDZI@OAKLANDCC.EDU
OFFICE HOURS: 8:30am – 5:00pm Monday – Friday
ROOM: Auto Lab A - 200
Paraprofessional: Alice Degrandchamp (248) 232-4108
Department Secretary: Carole Baier (248) 232-4118

CATALOG COURSE DESCRIPTION:

The student will develop the skills required to properly service the hydraulic brake system. Utilization of hands-on training and work experience on licensed vehicles developing saleable skills on the job entry-level. The student will rebuild or renew all components of current major automotive manufacturers' brake systems with emphasis on safe and proper work habits and procedures. Course/lab fees.

COURSE GOALS:

All courses in the ATA Program are competency-based (C.B.) designed to accommodate two major objectives:

1) To provide you, the student, with the necessary knowledge of Motor Vehicle theory (testing and diagnosis), and proper repair procedures necessary to qualify you for an entry-level position in the Motor Vehicle Servicing or Engineering Technician industry.

2) To prepare you for successful accomplishment of a licensing test, which is required for all auto mechanics, by law, in the State of Michigan.

You must successfully complete a Safety Test before starting work. You will not be allowed to work in the lab if you are not wearing your safety glasses. Your safety glasses must be worn while procuring tools from the crib and any time you are in the lab. Tools will not be distributed unless you have your safety glasses on.

Each course provides the necessary knowledge and hands-on experience (70% performance) to begin a career as an entry-level technician. OCC has been teaching these courses successfully for over 20 years.

Students receiving a "B" or above in coursework will not have problems passing State licensing tests or national ASE certification tests. Also, these students will receive recommendations for employment from the Motor Vehicle Technology faculty. Employment available as co-op with helper permit immediately, or license after two classes.

To begin work, students will need a large tool chest or lower rollaway toolbox and approximately $1,500 in start-up tools. Once employment has begun, local tool suppliers will finance purchases for additional tools. All technicians own their own tools.

Opportunities for employment are high – any place in the U.S.A. – with extremely high concentration in Oakland, Wayne, Macomb, Genesee, and St. Clair Counties. Technicians can start as high as $10-$13 per hour, with opportunities to earn between $50,000-70,000/year after four years experience in this field.

For additional information please contact:
Prof. H.A. Hildebrandt 248-232-4204 Fax 810-779-3003

GRADING STANDARDS & PRACTICES:

All of the ATA courses are graded in the same manner.

70% of the grade is based on completion of 40 of the 52 listed as P.O.'s (Performance Objectives), which are the competencies needed for each licensed area. The ten bolded P.O.'s must be included in the 40 P.O.'s you choose (i.e. bolded P.O.'s are mandatory you must complete them in order to pass the course). All lab work must be completed in the OCC Auto Lab to receive credit for P.O.'s. ***P.O.'s must be turned in no later than the next class session to receive credit.***

30% of the grade is based on two examinations:

One Mid-Term Exam which is directed more toward theory;
One Final Exam on the last day of class which leans more toward troubleshooting problems and repair procedure. The Exam questions are similar in structure to the questions on the State of Michigan and A.S.E. tests.

The following scale will apply to the Performance Objectives Percentage and Examination Percentage.

94 – 100% = A
87 – 93% = B
80 – 86% = C
75 – 79% = D
0 – 74% = F

TEXTBOOK AND SUPPLIES:

Automotive Brake Systems 4th Edition $ 104.70
Note: Contains Shop Manual and Classroom Manual
3 ring binder
Safety glasses
ANY PARTS YOU NEED FOR REPAIRS, AND FOR ANY BRAKE SERVICE REPAIR PARTS ON YOUR VEHICLE

REQUIRED TOOLS:

All tools and special equipment are provided for lab activities. Students will be required to provide their own tools to become employed. They will be given a list of recommended basic tools and tool box. Snap-On Tool Company offers a special 50% one-time discount for students enrolled in college automotive programs. The Industrial Education representative will make a presentation to the class.

AUBURN HILLS CAMPUS COUNSELING:

B-BUILDING, ROOM B - 238

Counseling Office	(248) 232-4350	Hours:	
Fax	(248) 232-4355	Monday-Thursday	8:30 am - 8:00 pm
COMPASS Appointments	(248) 232-4436	Friday	8:30 am - 5:00 pm

Full-Time Counselors		Adjunct Counselors	Support Staff
Name	Office	Sarah Abraham	Susan Mamros
Charlie Kurzer, Department Chair	B-239	C. Renee Henson	Anna Bouchard
Verna Love	B-226	Rhonda Gaines	
Pat Shipp May	B-229	Rose Gooley	
Gail Mays	B-228	Jan Janks	
Pat Nowaczynski	B-235	Cindy Kozak	
Carlos Olivarez	B-237		
Alicia Paramo-Dionne	B-233		
Douglas Riddering	B-231		

If you have questions that resemble issues discussed in a counseling appointment, you should call (248) 232-4350 to schedule an appointment with an Auburn Hills counselor. If you have questions that are brief and allow for a short response, you may click on the link to e-mail your question to an Auburn Hills counselor.

AUBURN HILLS CAMPUS ACADEMIC SUPPORT CENTER:

B-Building, Room B – 110

ASC Hours - Academic Year 2007-2008				
Session	***Fall***	***Winter***	***Summer I***	***Summer II***
Dates	August 30 - Dec.17	Jan.7 - April 28	May 5 - June 25	June 30 - August 19
Days	***Hours***	***Hours***	***Hours***	***Hours***
Mon-Thu	8:30am-7:00pm	8:30am-7:00pm	8:30am-7:00pm	8:30am-7:00pm
Friday	8:30am-4:30pm	8:30am-4:30pm	8:30am-4:30pm	8:30am-4:30pm
Saturday	10:00am-2:00pm	10:00am-2:00pm	10am-2:pm	Closed

WITHDRAWALS:

If, during the course of the semester, a student decides to withdraw from the course, for whatever reason, the student must fill out the appropriate form in the counseling office, in order to receive the mark "W." Students who simply stop attending will receive a final grade of "F." Last Day to drop this class is the Friday of 12th week of instruction.

ADA NOTIFICATION:

Students requiring special assistance (including those affected by the American with Disabilities Act) should contact the PASS office, which will inform the instructor of any special conditions to the student's learning.

SUBJECT-TO-CHANGE NOTIFICATION:

Occasionally, necessary deviations from the syllabus may occur, and will always be announced by the instructor in class.

AUBURN HILLS CAMPUS
SCHEDULE OF SERVICE HOURS

AUBURN HILLS CAMPUS
SCHEDULE OF SERVICE HOURS

WINTER 2008
(Hours Subject to change)

Department	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Admissions **Business Office** **Financial Aid** **Records** **Registration**	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-5:00pm	Closed
Bookstore (Refer to Schedule for extended hours)	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-5:00pm	Closed
Cafeteria	Closed	Closed	Closed	Closed	Closed	Closed
Children's Center	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:00pm	Closed
Counseling	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-5:00pm	Closed
Department/Faculty Secretaries	8:30am-5:00pm[1]	8:30am-5:00pm[1]	8:30am-5:00pm[1]	8:30am-5:00pm[1]	8:30am-5:00pm[1]	Closed
Health and PE Building	9:00am-9:30pm	9:00am-9:30pm	9:00am-9:30pm	9:00am-9:30pm	9:00am-9:30pm	9:00am-3:00pm
Academic Support Center COMPASS testing-Refer to ASC Flyer	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-4:30pm	10:00am-2:00pm
International Student Advisor Walk-in Hours	9:30am-11:30am 1:30pm-4:30pm[2]	9:30am-11:30am 1:30pm-4:30pm[2]	9:30am-11:30am 1:30pm-4:30pm[2]	9:30am-11:30am 1:30pm-4:30pm[2]	By special arrangement[2]	Closed
Java Cart	8:00am-8:00pm	8:00am-8:00pm	8:00am-8:00pm	8:00am-8:00pm	Closed	Closed
Library	8:00am-10:00pm	8:00am-10:00pm	8:00am-10:00pm	8:00am-10:00pm	8:00am-4:30pm	9:00am-3:00pm
PASS	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	Closed
Veterans Affairs Office	9:30am-5:30pm	9:30am-6:00pm	9:30am-5:30pm	9:30am-6:00pm	Closed	Closed

[1] - Varies by department
[2] - Office hours are 8:30am-5:00pm. No support staff, so shortened walk-in hours are required to complete immigration work.

ATA 1100
BRAKES AND BRAKING SYSTEMS
COURSE DESCRIPTION AND PERFORMANCE OBJECTIVES
Developed by Prof. H. A. Hildebrandt
Automotive Technology Servicing or Engineering Technician

ATA 1100 PERFORMANCE OBJECTIVES

1. Diagnose brake system failure or malfunction.
2. Introduction to A.B.S. system.
3. Replace corroded parking brake cables.
4. Adjust parking brake linkage.
5. Replace parking brake linkage.
6. Adjust brakes.
7. Adjust hand brake external band (drive line parking brake), light truck.
8. Replace hand brake external band (drive line parking brake), light truck.
9. Match wheels to tires.
10. Balance wheels and tires.
11. Bleed hydraulic brakes (gravity - pressure - manual pump individual).
12. Replace brake fluid.
13. Perform operational brake inspection (complete).
14. Replace brake shoes (Bendix - Bendix Type I Rear).
15. Inspect and refinish brake drums.
16. Inspect and replace brake pads (disc brakes), front.
17. Inspect and replace brake pads (disc brakes), rear.
18. Inspect and turn rotor (disc brakes) (full-floating, integral and composite).
19. Test the efficiency of the master cylinder.
20. Test the efficiency of the caliper.

21. Test the efficiency of the wheel cylinder.

22. Test caliper returnability.

23. Overhaul disc brake calipers.

24. Test metering valve operation.

25. Test proportioning valve operation.

26. Test pressure differential valve.

27. Overhaul wheel cylinder.

28. Replace wheel cylinder.

29. Recondition backing plates.

30. Replace backing plate.

31. Replace brake hoses.

32. Replace hydraulic lines and fittings.

33. Double flare a line.

34. Metric flare a line.

35. Inspect, repair or replace self-adjusters.

36. Remove, replace, clean, repack and adjust front wheel bearings and seals.

37. Replace front wheel bearings.

38. Replace rear axle shaft, bearing and seal (pressed-on type).

39. Replace rear axle shaft, bearing and seal (in axle housing, Salisbury-type).

40. Remove and replace brake power booster.

41. Rebuild brake-power units (vacuum and hydraulic).

42. Overhaul master cylinder.

43. Bench bleed master cylinder.

44. Replace metering valve.

45. Replace proportioning valve.

46. Replace pressure differential valve.

47. Replace combination valve.

48. Test brake light switch.

ATA – 1100 4th Edition Fall 2007

BRAKE SYSTEM SERVICE

SCHEDULE OF ASSIGNMENTS AND TESTS

Session	Date	Class Activity and Tests	Reading / Homework
1	1/9	Overview Performance Objectives Safety and Safety Test	Read Chapter 1 Classroom Manual Read Chapter 1 Shop Manual
2	1/16	Basic Principles of Braking Hydraulic System Disc-Drum Lathe	Read Chapter 2 Classroom Manual Read Chapter 2 Shop Manual
3	1/23	Drum Brake Assembly and Operation Wheel Bearing Service Lab	Read Chapter 8 Classroom Manual Read Chapter 8 Shop Manual
4	1/30	Disc Brake Operation Lab	Read Chapter 7 Classroom Manual
5	2/6	Caliper and Rotor Service Wheel Cylinder Service Lab	Read Chapter 7 Shop Manual
6	2/13	Brake Adjustment and Shoe Replacement Machining Brake Drums and Rotors Lab	Read Handout
7	2/20	Master Cylinders Lab	Read Chapter 4 Classroom Manual Read Chapter 4 Shop Manual
8	3/5	Standard Valves (Metering, Proportional, Pressure Differential) Lab	Read Chapter 5 Classroom Manual Read Chapter 5 Shop Manual
9	3/12	Lab Mid – Semester Test Review	Take Home Mid – Semester Test
10	3/19	Lab Mid – Semester Test Due	Read Chapter 6 Classroom Manual Read Chapter 6 Shop Manual
11	3/26	A.B.S. System Theory Lab	Read Chapter 9 Shop Manual

12	4/2	A.B.S. System Troubleshooting Lab	Read Chapter 10 Classroom Manual Read Chapter 10 Shop Manual
13	4/9	A.B.S. Repair Lab	Read Chapter 10 Shop Manual
14	4/16	Review Lab	Take Home Final Exam
15	4/23	Final Exam Due	

OAKLAND
COMMUNITY
COLLEGE

SYLLABUS

Front Suspension and Steering Service ATA-1200
Room A – 203
Section # A1503
Thursday 5pm- 9:55pm
Winter 2008

INSTRUCTOR: Joseph M. Burdzinski
OFFICE: M-TEC 210
PHONE: (248) 232-4177
EMAIL: JMBURDZI@OAKLANDCC.EDU
OFFICE HOURS: 8:30am – 5:00pm Monday – Friday
ROOM: Auto Lab A - 200
Paraprofessional: Alice Degrandchamp (248) 232-4108
Department Secretary: Carole Baier (248) 232-4118

CATALOG COURSE DESCRIPTION:

The student will develop the skills required to properly service the front suspension and steering system of current model vehicles. A great portion of class time will be spent in the lab rebuilding or renewing all components of the suspension and steering systems. Wheel alignment measurement and correction will be preformed by all students on all major automotive equipment, with an emphasis on safe and proper work habits and procedures. Course/lab fees.

COURSE GOALS:

All courses in the ATA Program are competency-based (C.B.) designed to accommodate two major objectives:

1) To provide you, the student, with the necessary knowledge of Motor Vehicle theory (testing and diagnosis), and proper repair procedures necessary to qualify you for an entry-level position in the Motor Vehicle Servicing or Engineering Technician industry.

2) To prepare you for successful accomplishment of a licensing test, which is required for all auto mechanics, by law, in the State of Michigan.

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For additional information please contact:
Prof. H.A. Hildebrandt 248-232-4204 Fax 810-779-3003

GRADING STANDARDS & PRACTICES:

All of the ATA courses are graded in the same manner.

70% of the grade is based on completion of 40 of the 54 listed P.O.'s (Perfromance Objectives), which are the competencies needed for each licensed area. The ten bolded P.O.'s must be included in the 40 P.O.'s you choose i.e. bolded P.O.'s are mandatory). P.O.'s must be turned in no later than the next class session to receive credit. All lab work must be completed in the OCC Auto Lab to receive credit for P.O.'s

30% of the grade is based on two examinations:

One Mid-Term Exam which is directed more toward theory;

One Final Exam on the last day of class which leans more toward troubleshooting problems and repair procedure. The Exam questions are similar in structure to the questions on the State of Michigan and A.S.E. tests.

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Note: Contains Shop Manual and Classroom Manual
3 ring binder
ANY PARTS YOU NEED FOR REPAIRS, AND FOR ANY SUSPENSION SERVICE REPAIR PARTS ON YOUR VEHICLE

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AUBURN HILLS CAMPUS COUNSELING:

B-BUILDING, ROOM B - 238

Auburn Hills Counseling

2900 Featherstone Road, Auburn Hills, MI 48326-2845, Building B, 2nd floor, Room 238

Counseling Office	(248) 232-4350	Hours:	
Fax	(248) 232-4355	Monday-Thursday	8:30 am - 8:00 pm
COMPASS Appointments	(248) 232-4436	Friday	8:30 am - 5:00 pm

Full-Time Counselors		Adjunct Counselors	Support Staff
Name	Office	Sarah Abraham	Susan Mamros
Charlie Kurzer, Department Chair	B-239	C. Renee Henson	Anna Bouchard
Verna Love	B-226	Rhonda Gaines	
Pat Shipp May	B-229	Rose Gooley	
Gail Mays	B-228	Jan Janks	
Pat Nowaczynski	B-235	Cindy Kozak	
Carlos Olivarez	B-237		
Alicia Paramo-Dionne	B-233		
Douglas Riddering	B-231		

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AUBURN HILLS CAMPUS ACADEMIC SUPPORT CENTER:

B-Building, Room B - 110

ASC Hours - Academic Year 2007-2008				
Session	***Fall***	***Winter***	***Summer I***	***Summer II***
Dates	August 30 - Dec.17	Jan.7 - April 28	May 5 - June 25	June 30 - August 19
Days	***Hours***	***Hours***	***Hours***	***Hours***
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Saturday	10:00am-2:00pm	10:00am-2:00pm	10am-2:pm	Closed

WITHDRAWALS:

If, during the course of the semester, a student decides to withdraw from the course, for whatever reason, the student must fill out the appropriate form in the counseling office, in order to receive the mark "W." Students who simply stop attending will receive a final grade of "F." ." Last Day to drop this class is the Friday of 12th week of instruction.

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Students requiring special assistance (including those affected by the American with Disabilities Act) should contact the PASS office, which will inform the instructor of any special conditions to the student's learning.

SUBJECT-TO-CHANGE NOTIFICATION:

Occasionally, necessary deviations from the syllabus may occur, and will always be announced by the instructor in class.

AUBURN HILLS CAMPUS
SCHEDULE OF SERVICE HOURS

AUBURN HILLS CAMPUS
SCHEDULE OF SERVICE HOURS

WINTER 2008
(Hours Subject to change)

Department	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Admissions **Business Office** **Financial Aid** **Records** **Registration**	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-5:00pm	Closed
Bookstore (Refer to Schedule for extended hours)	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-5:00pm	Closed
Cafeteria	Closed	Closed	Closed	Closed	Closed	Closed
Children's Center	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:00pm	Closed
Counseling	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-5:00pm	Closed
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Health and PE Building	9:00am-9:30pm	9:00am-9:30pm	9:00am-9:30pm	9:00am-9:30pm	9:00am-9:30pm	9:00am-3:00pm
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International Student Advisor Walk-in Hours	9:30am-11:30am 1:30pm-4:30pm[2]	9:30am-11:30am 1:30pm-4:30pm[2]	9:30am-11:30am 1:30pm-4:30pm[2]	9:30am-11:30am 1:30pm-4:30pm[2]	By special arrangement[2]	Closed
Java Cart	8:00am-8:00pm	8:00am-8:00pm	8:00am-8:00pm	8:00am-8:00pm	Closed	Closed
Library	8:00am-10:00pm	8:00am-10:00pm	8:00am-10:00pm	8:00am-10:00pm	8:00am-4:30pm	9:00am-3:00pm
PASS	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	Closed
Veterans Affairs Office	9:30am-5:30pm	9:30am-6:00pm	9:30am-5:30pm	9:30am-6:00pm	Closed	Closed

[1] - Varies by department
[2] - Office hours are 8:30am-5:00pm. No support staff, so shortened walk-in hours are required to complete immigration work.

ATA 1200
ALIGNMENT AND SUSPENSION
COURSE DESCRIPTION AND PERFORMANCE OBJECTIVES
Developed by Prof. H. A. Hildebrandt
Automotive Technology Servicing or Engineering Technician

ATA 1200 PERFORMANCE OBJECTIVES

1. Rotate tires.
2. Balance wheels and tires.
3. Perform visual inspections of the suspension system.
4. Adjust front wheel bearings. Inspect wheel bearings and seals (replace, if necessary).
5. Replace collapsible mast jackets (steering column).
6. Repair tilt and telescoping steering wheel.
7. Diagnose wear and alignment problems.
8. Check and align front end (both two-wheel and four-wheel type).
9. Remove and replace stabilizers, sway bar, strut bar, and bushings.
10. Remove and replace upper and lower control arms.
11. Replace front suspension control arm bushings.
12. Check condition of tapered holes in steering spindles.
13. Remove and replace ball joints.
14. Remove and replace king pins.
15. Diagnose steering problems.
16. Inspect steering gear.
17. Inspect steering linkage.
18. Remove and replace tie rod end, center link and idler arm.
19. Replace steering spindles.
20. Adjust worm and sector in steering gear.
21. Remove and replace manual steering gear assembly.

22. Overhaul manual steering gear assembly.

23. Replace manual steering gear components.

24. Diagnose power steering system problems.

25. Test hydraulic pressure.

26. Adjust or rebuild power steering units. Check power steering fluid level.

27. Remove and replace power steering gear assembly.

28. Remove and replace rack and pinion steering assembly.

29. Overhaul rack and pinion steering assembly.

30. Remove and replace power steering lines.

31. Overhaul power steering pump.

32. Replace power steering pump.

33. Replace power steering components.

34. Remove and replace torsion bar.

35. Adjust or replace torsion bars.

36. Remove and replace coil springs.

37. Inspect and replace steering damper.

38. Remove and replace shock absorbers.

39. Remove and replace leaf spring (both front and rear).

ATA – 1200

FRONT SUSPENSION AND STEERING SERVICE

SCHEDULE OF ASSIGNMENTS AND TESTS

Session	Date	Class Activity and Tests	Reading / Homework
1	1/10	Overview Performance Objectives Safety and Safety Test	Read Chapter 1 Classroom Manual Read Chapter 1 Shop Manual
2	1/17	Basic Principles of Front Suspension Rear Suspension Systems Basic Hand Tools	Read Chapter 3 Classroom Manual Read Chapter 2 Shop Manual
3	1/24	Tires and wheel Balance Wheel Bearing Service Lab	Read Chapter 4 Classroom Manual Read Chapter 3 Shop Manual
4	1/31	Wheel Alignment Fundamentals Alignment Equipment Lab	Read Chapter 6 & 7Classroom Manual Read Chapter 4 Shop Manual
5	2/7	Pre-Alignment Inspection and Adjustments Camber, Caster and Toe Lab	Read Chapter 15 Classroom Manual Read Chapter 15 Shop Manual
6	2/14	Front Suspension System Components and Replacement Lab	Read Chapter 5 Classroom Manual Read Chapter 5 Shop Manual
7	2/21	Steering Column and Linkage Lab	Read Chapter 12 Classroom Manual Read Chapter 9 Shop Manual
8	3/6	Lab Mid – Semester Test Review	Take Home Mid – Semester Test
9	3/13	Lab Mid – Semester Test Due	Read Chapter 9 Classroom Manual
10	3/20	Lab	Read Handouts
11	3/27	Steering Gear Steering Gear Service Lab	Read Chapter 13 Classroom Manual Read Chapter 14 Shop Manual
12	4/12	Power Steering Systems Lab	Read Chapter 15 Classroom Manual

13	4/13	A.B.S. Repair Lab	Read Chapter 16 Classroom Manual Read Chapter 16 Shop Manual
14	4/17	Review for Final / Lab	Take Home Final Exam
15	4/24	Final Exam Due	

OAKLAND
COMMUNITY
COLLEGE

SYLLABUS
Automotive - Diesel Truck & Hybrid Systems
Electrical Service
ATA-1300
Room A – 203

Monday & Wednesday
Summer I 2008

INSTRUCTOR: Prof. Harry A. Hildebrandt
OFFICE: T-202
PHONE: (248) 232-4204 CELL: (313) 618-5922
EMAIL: HAHILDEB@OAKLANDCC.EDU
OFFICE HOURS: 3:00PM-5:00PM IN AUTO LAB ON TUESDAY & THURSDAY
ROOM: Auto Lab A - 200
Paraprofessional: Alice Degrandchamp (248) 232-4108
Department Secretary: Carole Baier (248) 232-4118

CATALOG COURSE DESCRIPTION:

THE STUDENT WILL DEVELOP THE SKILLS REQUIRED TO SERVICE THE 12-24-42-300 VOLT BATTERY CRANKING AND CHARGING SYSTEMS AND ELECTRICAL ACCESSORIES SYSTEMS FOR ALL CURRENT MAJOR AUTOMOBILES, TRUCKS, HYBRIDS, AND RECREATIONAL VEHICLES. THEORY OF THE SYSTEM AS WELL AS HANDS-ON TRAINING WILL PROVIDE JOB ENTRY LEVEL SKILLS FOR THE STUDENTS. CURRENT MANUFACTURERS' SPECIFICATIONS AS WELL AS SAFE AND PROPER WORK HABITS AND PROCEDURES WILL BE EMPHASIZED. COURSE/LAB FEE.

COURSE GOALS:

All courses in the ATA Program are competency-based (C.B.) designed to accommodate two major objectives:

1) To provide you, the student, with the necessary knowledge of Motor Vehicle theory (testing and diagnosis), and proper repair procedures necessary to qualify you for an entry-level position in the Motor Vehicle Servicing or Engineering Technician industry.

2) To prepare you for successful accomplishment of a licensing test, which is required for all auto mechanics, by law, in the State of Michigan.

You must successfully complete a Safety Test before starting work. You will not be allowed to work in the lab if you are not wearing your safety glasses. Your safety glasses must be worn while procuring tools from the crib and any time you are in the lab. Tools will not be distributed unless you have your safety glasses on.

Each course provides the necessary knowledge and hands-on experience (70% performance) to begin a career as an entry-level technician. OCC has been teaching these courses successfully for over 20 years.

Students receiving a "B" or above in coursework will not have problems passing State licensing tests or national ASE certification tests. Also, these students will receive recommendations for employment from the Motor Vehicle Technology faculty. Employment available as co-op with helper permit immediately, or license after two classes.

To begin work, students will need a large tool chest or lower rollaway toolbox and approximately $1,500 in start-up tools. Once employment has begun, local tool suppliers will finance purchases for additional tools. All technicians own their own tools.

Opportunities for employment are high – any place in the U.S.A. – with extremely high concentration in Oakland, Wayne, Macomb, Genesee, and St. Clair Counties. Technicians can start as high as $10-$13 per hour, with opportunities to earn between $50,000-70,000/year after four years experience in this field.

For additional information please contact:
Prof. H.A. Hildebrandt (248) 232-4204 Fax (586) 779-3003

GRADING STANDARDS & PRACTICES:

All of the ATA courses are graded in the same manner.

70% of the grade is based on completion of 40 of the 54 listed P.O.'s (Perfromance Objectives), which are the competencies needed for each licensed area. The ten bolded P.O.'s must be included in the 40 P.O.'s you choose i.e. bolded P.O.'s are mandatory). P.O.'s must be turned in no later than the next class session to receive credit. All lab work must be completed in the OCC Auto Lab to receive credit for P.O.'s

30% of the grade is based on two examinations:

One Mid-Term Exam which is directed more toward theory;

One Final Exam on the last day of class which leans more toward troubleshooting problems and repair procedure. The Exam questions are similar in structure to the questions on the State of Michigan and A.S.E. tests.

The following scale will apply to the Performance Objectives Percentage and Examination Percentage.

94 – 100% = A
87 – 93% = B
80 – 86% = C
75 – 79% = D
0 – 74% = F

TEXTBOOK AND SUPPLIES:

Today's Technician – Automotive Electricity & Electronics, 3rd Edition, Classroom Manual – Barry Hollembeak

ANY PARTS YOU NEED FOR REPAIRS, AND FOR ANY SUSPENSION SERVICE REPAIR PARTS ON YOUR VEHICLE

REQUIRED TOOLS:

All tools and special equipment are provided for lab activities. Students will be required to provide their own tools to become employed. They will be given a list of recommended basic tools and tool box. Snap-On Tool Company offers a special 50% one-time discount for students enrolled in college automotive programs. The Industrial Education representative will make a presentation to the class.

AUBURN HILLS CAMPUS COUNSELING:

B-BUILDING, ROOM B - 238

Auburn Hills Counseling

2900 Featherstone Road, Auburn Hills, MI 48326-2845, Building B, 2nd floor, Room 238

Counseling Office	(248) 232-4350	Hours:	
Fax	(248) 232-4355	Monday-Thursday	8:30 am - 8:00 pm
COMPASS Appointments	(248) 232-4436	Friday	8:30 am - 5:00 pm

Full-Time Counselors		Adjunct Counselors	Support Staff
Name	Office	Sarah Abraham	Susan Mamros
Charlie Kurzer, Department Chair	B-239	C. Renee Henson	Anna Bouchard
Verna Love	B-226	Rhonda Gaines	
Pat Shipp May	B-229	Rose Gooley	
Gail Mays	B-228	Jan Janks	
Pat Nowaczynski	B-235	Cindy Kozak	
Carlos Olivarez	B-237		
Alicia Paramo-Dionne	B-233		
Douglas Riddering	B-231		

If you have questions that resemble issues discussed in a counseling appointment, you should call (248) 232-4350 to schedule an appointment with an Auburn Hills counselor. If you have questions that are brief and allow for a short response, you may click on the link to e-mail your question to an Auburn Hills counselor.

AUBURN HILLS CAMPUS ACADEMIC SUPPORT CENTER:

B-Building, Room B - 110

ASC Hours - Academic Year 2007-2008				
Session	***Fall***	***Winter***	***Summer I***	***Summer II***
Dates	August 30 - Dec.17	Jan.7 - April 28	May 5 - June 25	June 30 - August 19
Days	***Hours***	***Hours***	***Hours***	***Hours***
Mon-Thu	8:30am-7:00pm	8:30am-7:00pm	8:30am-7:00pm	8:30am-7:00pm
Friday	8:30am-4:30pm	8:30am-4:30pm	8:30am-4:30pm	8:30am-4:30pm
Saturday	10:00am-2:00pm	10:00am-2:00pm	10am-2:pm	Closed

WITHDRAWALS:

If, during the course of the semester, a student decides to withdraw from the course, for whatever reason, the student must fill out the appropriate form in the counseling office, in order to receive the mark "W." Students who simply stop attending will receive a final grade of "F." ." Last Day to drop this class is the Friday of 12th week of instruction.

ADA NOTIFICATION:

Students requiring special assistance (including those affected by the American with Disabilities Act) should contact the PASS office, which will inform the instructor of any special conditions to the student's learning.

SUBJECT-TO-CHANGE NOTIFICATION:

Occasionally, necessary deviations from the syllabus may occur, and will always be announced by the instructor in class.

AUBURN HILLS CAMPUS
SCHEDULE OF SERVICE HOURS

AUBURN HILLS CAMPUS
SCHEDULE OF SERVICE HOURS

SUMMER I 2008
(Hours Subject to change)

Department	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Admissions **Business Office** **Financial Aid** **Records** **Registration**	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-5:00pm	Closed
Bookstore (Refer to Schedule for extended hours)	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-5:00pm	Closed
Cafeteria	Closed	Closed	Closed	Closed	Closed	Closed
Children's Center	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:00pm	Closed
Counseling	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-5:00pm	Closed
Department/Faculty Secretaries	8:30am-5:00pm[1]	8:30am-5:00pm[1]	8:30am-5:00pm[1]	8:30am-5:00pm[1]	8:30am-5:00pm[1]	Closed
Health and PE Building	9:00am-9:30pm	9:00am-9:30pm	9:00am-9:30pm	9:00am-9:30pm	9:00am-9:30pm	9:00am-3:00pm
Academic Support Center COMPASS testing-Refer to ASC Flyer	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-4:30pm	10:00am-2:00pm
International Student Advisor Walk-in Hours	9:30am-11:30am 1:30pm-4:30pm[2]	9:30am-11:30am 1:30pm-4:30pm[2]	9:30am-11:30am 1:30pm-4:30pm[2]	9:30am-11:30am 1:30pm-4:30pm[2]	By special arrangement[2]	Closed
Java Cart	8:00am-8:00pm	8:00am-8:00pm	8:00am-8:00pm	8:00am-8:00pm	Closed	Closed
Library	8:00am-10:00pm	8:00am-10:00pm	8:00am-10:00pm	8:00am-10:00pm	8:00am-4:30pm	9:00am-3:00pm
PASS	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	Closed
Veterans Affairs Office	9:30am-5:30pm	9:30am-6:00pm	9:30am-5:30pm	9:30am-6:00pm	Closed	Closed

[1] - Varies by department
[2] - Office hours are 8:30am-5:00pm. No support staff, so shortened walk-in hours are required to complete immigration work.

ATA 1300
MOTOR VEHICLE ELECTRICAL AND ELECTRONIC SYSTEMS
COURSE DESCRIPTION AND PERFORMANCE OBJECTIVES
Developed by Prof. H. A. Hildebrandt
Automotive Technology Servicing or Engineering Technician

ATA 1300 PERFORMANCE OBJECTIVES

1. Service or replace batteries, cables and battery box.
2. Charge batteries.
3. Clean battery and cables.
4. Perform capacity (load) test.
5. Perform cell probe test.
6. Perform A.R.P.S. test.
7. Check electrolyte level.
8. Perform hydrometer test.
9. Perform operational inspection of lighting systems.
10. Isolate opens, grounds, and shorts.
11. Adjust headlights.
12. Repair or replace lighting system components.
13. Replace ignition switch and resistor.
14. Perform all diagnostic checks, using electronic digital meter and scan tools.
15. Diagnose, inspect, repair or replace faulty components of solid state and breaker/condenser-type ignition systems.
16. Evaluate alternator/generator and regulator output.
17. Modify digital regulator system.
18. Repair or replace charging system regulators.
19. Test and set voltage regulator.
20. Repair generators and alternators.
21. Analyze malfunctions in the cranking system.

22. Overhaul alternator.

23. Replace generators and alternators.

24. Analyze malfunctions in the cranking system.

25. Remove and replace starter motor.

26. Replace starter solenoids.

27. Replace starter drive.

28. Overhaul starter.

29. Replace flywheel and flywheel ring gear.

30. Replace or adjust neutral safety switch.

31. Diagnose neutral safety relay (Chrysler).

32. Remove and replace steering wheel.

33. Repair tilt and telescoping steering wheel's electrical components.

34. Test and repair horn circuit (button, relay, horn units).

35. Replace flasher units (turn signals).

36. Replace flasher units (emergency).

37. Adjust, repair or replace back-up light switch.

38. Locate and repair shorts and open circuits in wiring.

39. Locate fuse boxes.

40. Repair or replace fuse box assembly.

41. Replace wiring harnesses.

42. Solder wire connections (rosin core).

43. Splice wires and ends.

44. Test and rewire I.P. units.

45. Test and replace instrument panel units.

46. Analyze cause of electrical fires.

47. Install CD player.

48. Remove and replace radio speakers and wiring.

49. Install radio.

50. Remove and replace instrument panel.

51. Test, remove and replace faulty instrument gauges and warning lamps.

52. Test, remove and replace switches, circuit breakers and fuses.

53. Remove and replace gauge sending units (fuel, temperature,oil, etc.).

54. Replace heater/AC control units.

55. Inspect and replace heating and cooling control cables and switches.

56. Replace heating and air conditioner fan motor.

57. Test and repair cruise control units.

58. Inspect and test windshield wiper motors.

59. Inspect and test windshield blades and arms.

60. Repair windshield wiper mechanisms and controls.

61. Replace or repair chassis and under-hood wiring.

62. Diagnose problems with rear window de-icers.

ATA 1300 - Electrical Class
Course Schedule

Session	Date	Material to be Covered	Reading / Homework
1		Overview Performance Objectives Safety and Safety Test	
		Basic Electricity Theory	
2		Basic Electricity Ohm's Law Automotive Battery Types of Circuits LAB	
3		Automotive Battery Testing Charging System Starting System Battery Voltage Drop Test LAB	
4		Electrical Test Instruments Magnets, Magnetism Energy Conversion LAB	
5		Electrical Power Distribution and Circuit Protection Disassembly and Testing of Alternator and Starter Motor LAB	
6		Reading Electrical Wire Diagrams Wiring and Wire Service LAB	
7		Electrical Diagnosis Test Method Common Point LAB	
8		Lighting Circuits	
		Horns and Buzzer Warning Systems	
		LAB	
9		LAB	MID-SEMESTER EXAM
10		LAB	
11		LAB	
12		LAB	
13		LAB	
14		Review LAB	

15		FINAL EXAM	

OAKLAND
COMMUNITY
COLLEGE

SYLLABUS
Engine Support Systems Servicing ATA – 1400
Room A – 203
Section # A1504
Saturday 8:00am – 12:55pm
Winter 2008

INSTRUCTOR: Jeffrey Burdzinski
PHONE: (586) 864-3731
EMAIL: JJBURD@COMCAST.NET
OFFICE HOURS: Saturday 8:00am-5:00pm and by appointment
Paraprofessional: Alice Degrandchamp (248) 232-4108

CATALOG COURSE DESCRIPTION:

The student will develop the skills required to properly service the engine fuel, lubrication, cooling, exhaust and valve systems. A great portion of the class time will be spent in the laboratory performing tests, as well as repairing and renewing major components of the above named systems. The student will make adjustments, and replace components in accordance with manufacturers' specifications, with a major emphasis on developing safe and proper work habits and techniques. Course/lab fees.

COURSE GOALS:

All courses in the ATA Program are competency-based (C.B.) designed to accommodate two major objectives:

1) To provide you, the student, with the necessary knowledge of Motor Vehicle theory (testing and diagnosis), and proper repair procedures necessary to qualify you for an entry-level position in the Motor Vehicle Servicing or Engineering Technician industry.

2) To prepare you for successful accomplishment of a licensing test, which is required for all auto mechanics, by law, in the State of Michigan.

Each Automotive Technology course here at OCC provides the necessary knowledge and hands-on experience (70% performance) to begin a career as an entry-level technician. OCC has been teaching these courses successfully for over 25 years.

Students receiving a "B" or above in coursework will not have problems passing State licensing tests or national ASE certification tests. Also, these students will receive recommendations for employment from the Motor Vehicle Technology faculty. Employment is available as co-op with a helpers permit immediately, or license after two classes.

To begin work, students will need a large tool chest or lower rollaway toolbox and approximately $1,500 in start-up tools. Once employment has begun, local tool suppliers will finance purchases for additional tools. All technicians own their own tools.

Opportunities for employment are high – any place in the U.S.A. – with extremely high concentration in Oakland, Wayne, Macomb, Genesee, and St. Clair Counties. Technicians can start as high as $10-$13 per hour, with opportunities to earn between $50,000-70,000/year after four years experience in this field. It is possible to earn up to $100,000/year after many years of experience specializing in a specific type of automotive repair and becoming an ASE master technician.

For additional information please contact:
Prof. H.A. Hildebrandt 248-232-4204 Fax 810-779-3003

GRADING STANDARDS & PRACTICES:

All of the ATA courses are graded in the same manner based on the 70/30 concept. This class will be graded in the following matter:

70% of the grade is based on completion of 40 of the 89 listed P.O.'s (Performance Objectives; see attached sheet), which are the competencies needed for Engine Servicing and rebuilding. The P.O's are grouped in two sections, and a minimum of 10 are required from each category. The first section of P.O.'s focus specifically on **engine rebuilding and measuring**. These objectives can be completed on P.O. sheets or in an engine rebuilding workbook that will be provided upon request. The second section of P.O.'s deal specifically with **engine diagnosis and servicing**. These P.O.'s must be turned at the end of each class session to receive credit. NOTE: Individual worksheets from the Automotive Engines workbook can be substituted for a standard OCC P.O. but require instructor approval first.

30% of the grade is based on two examinations:

One Mid-Term Exam; which is directed more toward theory;

One Final Exam on the last day of class; which leans more toward troubleshooting problems and repair procedure. The Exam questions are similar in structure to the questions on the State of Michigan and A.S.E. tests.

With the proper tools, equipment, and technical resources, a certified engine technician must be able to satisfactorily perform the performance objectives listed on the attached sheets. To be a successful and profitable technician, it is in your best interest to complete as many of the P.O's as possible to become an expert in this field.

The following scale will apply to the Performance Objectives Percentage and Examination Percentage:

94 – 100% = A
87 – 93% = B
80 – 86% = C
75 – 79% = D
0 – 74% = F

SAFETY

You must successfully complete a Safety Test before starting work. Safety glasses must be worn at all times while in the shop even if you are NOT working. Your safety glasses must also be worn while procuring tools from the crib. Tools will not be distributed unless you have your safety glasses on. Safety glasses are available for purchase at the campus bookstore and at major auto parts stores and home repair centers. This rule is not only a policy of Oakland Community College but also of the Occupational Safety and Health Administration. The instructor has the authority to remove students from the auto lab that do not wear their safety glasses. Also, students will be removed who are observed acting in a matter that is a threat to the safety of themselves and others.

There is a dress code while working in the laboratory. Shirts must be worn tucked in while working on any rotating equipment or machinery and long pants must be worn at all times. Closed toe, leather non-athletic type of shoes must be worn. Steel toes are highly recommended.

Long hair must be tied up and either tucked into the back of the uniform shirt or pinned up in a way as it does not hang below the shoulders. All dangling jewelry must be removed prior to working in the lab. These procedures are all for your safety and will help a student have a pleasant learning experience in a safer environment.

TEXTBOOK AND SUPPLIES:

Automotive Engines Theory and Servicing, Fifth Edition
By: James D. Halderman
Note: Contains textbook and workbook

3-Ring Binder

Scantron packet #882E

ANY PARTS YOU NEED FOR REPAIRS, FOR ANY ENGINE SERVICE REPAIR PARTS ON YOUR VEHICLE OR ENGINE COMPONENTS, ARE SOLELY YOUR RESPONSIBILITY.

REQUIRED TOOLS:

All of the hand tools and special equipment necessary for automotive education are provided by Oakland Community College. However, when the student is ready for the world of work, they must have their own set of hand tools and tool box. This tool set can ultimately cost several thousand dollars. It is suggested that the student prepare for this investment by purchasing tools gradually while in the program. The Snap-On Tool Company offers a special 50% one-time discount for students enrolled in college automotive programs; contact any OCC instructor for further information.

CLASSROOM ETIQUETTE

While in the classroom, please show some courtesy to the instructor and other students by turning off all cell phones, pagers, PDA's, etc. Electronic devices may be used in class is they are assisting in the education process.

AUBURN HILLS CAMPUS COUNSELING:

Building B, 2nd floor, Room 238

Counseling Office	(248) 232-4350	Hours:	
Fax	(248) 232-4355	Monday-Thursday	8:30 am - 8:00 pm
COMPASS Appointments	(248) 232-4436	Friday	8:30 am - 5:00 pm

Full-Time Counselors		Adjunct Counselors	Support Staff
Name	Office	Sarah Abraham	Susan Mamros
Charlie Kurzer, Department Chair	B-239	C. Renee Henson	Anna Bouchard
Verna Love	B-226	Rhonda Gaines	
Pat Shipp May	B-229	Rose Gooley	
Gail Mays	B-228	Jan Janks	
Pat Nowaczynski	B-235	Cindy Kozak	
Carlos Olivarez	B-237		
Alicia Paramo-Dionne	B-233		
Douglas Riddering	B-231		

If you have questions that resemble issues discussed in a counseling appointment, you should call (248) 232-4350 to schedule an appointment with an Auburn Hills counselor. If you have questions that are brief and allow for a short response, you may e-mail your question to an Auburn Hills counselor.

AUBURN HILLS CAMPUS ACADEMIC SUPPORT CENTER:
Building B - Room 110

ASC Hours - Academic Year 2007-2008				
Session	***Fall***	***Winter***	***Summer I***	***Summer II***
Dates	August 30 - Dec.17	Jan.7 - April 28	May 5 - June 25	June 30 - August 19
Days	***Hours***	***Hours***	***Hours***	***Hours***
Mon-Thu	8:30am-7:00pm	8:30am-7:00pm	8:30am-7:00pm	8:30am-7:00pm
Friday	8:30am-4:30pm	8:30am-4:30pm	8:30am-4:30pm	8:30am-4:30pm
Saturday	10:00am-2:00pm	10:00am-2:00pm	10am-2:pm	Closed

WITHDRAWALS:

If, during the course of the semester, a student decides to withdraw from the course, for whatever reason, the student must fill out the appropriate form in the counseling office, in order to receive the mark "W." Students who simply stop attending will receive a final grade of "F". The last day to drop this class is the Friday of the 12th week of instruction. Please see the instructor prior to withdrawing.

ADA NOTIFICATION:

Students requiring special assistance (including those affected by the American with Disabilities Act) should contact the PASS office, which will inform the instructor of any special conditions to the student's learning.

SUBJECT-TO-CHANGE NOTIFICATION:

Occasionally, necessary deviations from the syllabus may occur, and will always be announced by the instructor in class.

AUBURN HILLS CAMPUS
SCHEDULE OF SERVICE HOURS
WINTER 2008
(Hours Subject to change)

Department	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Admissions **Business Office** **Financial Aid** **Records** **Registration**	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-5:00pm	Closed
Bookstore (Refer to Schedule for extended hours)	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-5:00pm	Closed
Cafeteria	Closed	Closed	Closed	Closed	Closed	Closed
Children's Center	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:00pm	Closed
Counseling	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-5:00pm	Closed
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Library	8:00am-10:00pm	8:00am-10:00pm	8:00am-10:00pm	8:00am-10:00pm	8:00am-4:30pm	9:00am-3:00pm
PASS	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	Closed
Veterans Affairs Office	9:30am-5:30pm	9:30am-6:00pm	9:30am-5:30pm	9:30am-6:00pm	Closed	Closed

[1] - Varies by department
[2] - Office hours are 8:30am-5:00pm. No support staff, so shortened walk-in hours are required to complete immigration work.

OAKLAND
COMMUNITY
COLLEGE

PERFORMANCE OBJECTIVES

Engine Support Systems Servicing ATA – 1400
Room A – 203
Section # A1504
Saturday 8:00am – 12:55pm
Winter 2008

Engine Assembly – rebuilding and measuring

1) Disassemble engine.
2) Clean engine parts and check for condition (wear, etc.).
3) Remove cylinder ridge.
4) Measure all internal parts.
5) De-glaze cylinder.
6) Replace piston(s).
7) Replace gaskets and seals.
8) Fit pistons, pins and rings.
9) Remove and replace oil pump.
10) Replace crankshaft bearings; inspect and correct bearing fit; inspect crankshaft and connecting rod assembly.
11) Plasticgauge engine bearings.
12) Replace connecting rods and bearings.
13) Replace camshaft and bearings.
14) Replace lifters.
15) Replace timing gear and chain or belt; set timing (static).
16) Degree a camshaft.
17) Inspect cylinder head and block deck for warp and cracks.
18) Resurface or replace valve seats.
19) Reface valves.
20) Replace valve guides.
21) Service and adjust valve train (rocker arms, pushrods, lifters, etc.)
22) Check valve springs (tension and squareness).
23) Perform operational inspections of the lubrication systems.
24) Prime lubrication system.
25) Replace core plugs (freeze plugs).
26) Prep engine block for hot tanking or thermal degreasing.

Engine problem diagnosis and systems servicing (Engine in vehicle)

1) Road test car for noise and performance diagnosis.
2) Diagnose mechanical engine noise.
3) Use scan tool to check for check for DTC's.
4) Perform engine vacuum test.
5) Perform cylinder balance test.
6) Perform cylinder compression test.
7) Perform cylinder leakage test.
8) Diagnose valve train and cylinder head malfunctions.
9) Adjust valves.
10) Remove and replace valve stem seals.
11) Remove and replace timing belt or gears and harmonic balancer.
12) Remove or install engine and transmission/transaxle from vehicle.
13) Remove and replace rear main seal.
14) Remove and replace oil pan.
15) Test and run an assembled engine (after rebuild).
16) Perform lubricant leak test to check for excess lube system leakage.
17) Replace drive or accessory belt or individual components (P.S. pump, Alt., tensioner, etc).
18) Replace engine mounts.
19) Perform general engine maintenance (Filter & Fluid changes - Oil, Transmission, PS).
20) Clean engine internally (see instructor). Note: "Motor Flush" or similar products must **NEVER** be used in an engine.

Exhaust Systems

21) Diagnose exhaust leaks.
22) Service or repair manifold heat controls.
23) Replace exhaust manifold.
24) Diagnose and repair turbocharger problems.

Cooling Systems

25) Diagnose coolant loss.
26) Diagnose overheating/no heat problems.
27) Chemically clean and flush cooling system.
28) Replace core plugs (freeze plugs).
29) Replace water pump.
30) Test and replace thermostat.
31) Replace variable speed fan.
32) R & R radiator.

Ignition Systems

33) Set timing (static and dynamic).
34) Test and repair ignition primary and secondary circuit components.
35) Inspect ignition switch, resistor, wiring, and coil of the primary circuit.

36) Rebuild the distributor.
37) Replace the starter.
38) Replace the spark plugs.

Intake and Fuel Systems

39) Remove and replace fuel pump (mechanical or electrical; engine or in tank).
39) Clean or replace fuel filter.
40) Repair or replace fuel lines and hoses.
41) Adjust throttle linkage.
42) Remove and replace intake manifold.
43) Test, repair, and adjust carburetor and controls.
44) Rebuild carburetor.
45) Diagnose and repair AIR pumps and related systems.
46) Test and replace fuel injectors.
47) Diagnose and repair supercharger problems.
48) Measure the fuel pressure.

Transmission/Transaxle Systems (manual or automatic)

49) Replace clutch assembly and/or release bearing and fork.
50) Adjust clutch pedal linkage.
51) Replace mechanical-type clutch.
52) Replace flywheel and flywheel ring gear.
53) Resurface flywheel.
54) Remove and replace the transmission mounts.
55) Replace pilot bearing.
56) Adjust column or floor shift linkage.
57) Adjust linkage from engine to automatic transmission.
58) Replace universal joints.
59) Remove and replace CV axles.

Emission Systems

60) Replace the PCV valve.
61) Remove and install the EGR valve.
62) Replace emission sensors.
63) Diagnose emission system problems.

NOTE: Performance Objectives can be completed by the students that are different from the above listed.

THESE ADDITIONAL P.O.'s REQUIRE PRIOR INSTRUCTOR APPROVAL

OAKLAND
COMMUNITY
COLLEGE

COURSE OUTLINE

Engine Support Systems Servicing ATA – 1400
Room A – 203
Section # A1504
Saturday 8:00am – 12:55pm
Winter 2008

Week	Material to be Covered	Required Reading
One January 12, 2008	Class Overview Autolab Safety Polices and Procedures Safety and Safety Test Student Project Review	Chapter 1
Two January 19, 2008	Precision Instruments Tools and Fasteners Engine Theory and Operation Engine Classifications & Specifications Engine Measurement	Chapters 2-4, 14
Three January 26, 2008	Engine Diagnosis Engine Removal from Vehicle Cooling Systems Lab	Chapters 5, 11, 12
Four February 2, 2008	Disassembly Procedures Inspecting Procedures Cleaning and Prep for Rebuild Lab	Chapters 12-13, 19
Five February 9, 2008	Crankshafts and Engine Bearings Piston and Rod Service Lab	Chapters 20-22
Six February 16, 2008	Camshafts and Valve Train Lab	Chapters 18 Hand-Outs

Seven **February 23, 2008**	**Cylinder Head Theory and Operation** **Cylinder Head and Valves** **Head Servicing** **Hand-out Mid-Semester Test (take home)** **Lab**	**Chapters 16 & 17**
February 25-March 1 Spring Break – College Closed		
Eight **March 8, 2008**	**Mid-Semester Test Due** **Lab**	**Chapter 15**
Nine **March 15, 2008**	**Assembling the Engine** **Gaskets and Sealing** **Lab**	**Chapter 23**
Ten **March 22, 2008**	**Engine Installation and Break-in** **Lubrication System** **Lab**	**Chapter 6, 24**
Eleven **March 29, 2008**	**Lab**	**Chapter 7**
Twelve **April 5, 2008**	**Lab**	**Chapter 8**
Thirteen **April 12, 2008**	**Lab**	**Chapter 9**
Fourteen **April 19, 2008**	**Review** **Give out Final Exam (take home)** **Lab**	
Fifteen **April 26, 2008**	**Final Exam** • **Due at end of class**	

The Dept. of Applied and Engineering Technology
Oakland Community College - Auburn Hills
Prof. Harry A. Hildebrandt, 248.232.4204
Parapro Alice Degrandchamp, 248.232.4108

Automotive Fundamentals

Including

Hybrid Vehicles

Learn How To Save Money Working on Your Own Vehicle, and Future Purchases of Cost Effective Vehicle

SUMMER I&II 2008

AUT 1110

Monday &Wednesday
1:00pm- 5:00pm
Auburn Hills Campus

Cad Students,

HIGH SCHOOL STUDENTS

Technical and Non-Technical Students(7.5 weeks)

No Pre-requisites Required

TO CHECK ON CLASSES FOR AUTOMOTIVE FALL I&II GO TO WWW.OAKLANDCC.EDU IN LATE JULY

AUTOMOTIVE TECHNOLOGY

AUT-1110 Auto Fundamentals ..... 4.0 Credits

Protective safety devices to be furnished by the students.

043999	A8201	8	06/30/08-08/18/08	MW	01:00PM-04:55PM	A203	Staff	$90

OAKLAND COMMUNITY COLLEGE

NEW
Automotive Fundamentals
Aut1110

Motor Vehicle Technology Center
Oakland Community College Auburn Hills Campus
Room 221

Tony Hildebrandt
248-232-4204

Alice DeGrandchamp
248-232-4108

Bring your questions and Problem Vehicles
No Previous Automotive Knowledge required, just a desire to learn.

This is a course for anyone who owns or plans to own a vehicle. Young women have had the highest interest but all ages and sexes between the ages of 16 and 95 are welcome. The average consumer will spend between $250,000-$500,000 on the purchase, repair, maintenance, interest and insurance for their personal vehicle during his or her lifetime. Each week (see attached syllabus) as we cover the different areas I will share cost saving techniques that you can use for all of your vehicles. (engines, transmissions, etc.) You also need this course if you have ever suspected you were being ripped off by a repair facility and would like to eliminate that feeling of uncertainty.

Personal Benefits

- You will learn how to be self-sufficient with regard to your automobile.
- You will understand the new computer system added to your vehicle.
- You will be able to repair your own vehicle.
- You will learn about rending special equipment when needed.
- You will learn how to purchase reliable parts at low cost.
- You will be able to conduct tests and inspections on your personal vehicle.
- You will disassemble and reassemble automotive motor components.
- You will learn about opportunities that can teach you how to repair and maintain your automobile for free or low cost.
- You can receive high school credit for this course.

OAKLAND COMMUNITY COLLEGE

NEW
Automotive Fundamentals
Aut1110

Motor Vehicle Technology Center
Oakland Community College Auburn Hills Campus

Cost of the course

Resident $319.80 Non-Resident $468.60 Senior Citizen (Resident) $199.84

Real Cost					
Resident:	Tuition	$319.80	Non -Resident:	Tuition	$ 468.60
	Savings	$ 454.00		Savings	$ 454.00

Your Gain: - $ 135.20 ***Your Gain: - $ 14.60***

You will perform the following tests and maintenance procedures during this course.

	Average Cost
Use a scan tool to check your vehicle computer diagnostic. (Software available for most vehicles)	$ 75.00
Analyze starting and charging systems & electric system.	$ 35.00
Analyze engine performance, scope, analyze & exhaust test (emissions) system exhaust	$ 75.00
Inspect brakes & systems.	$ 35.00
Inspect suspension & components.	$ 35.00
Test and Inspect Cooling systems.	$ 45.00
Test and Inspect A/C and Heating System.	$ 45.00
Change Engine oil, filter & lube chassis. (oil supplied) (filters not supplied)	$ 25.00
Change transmission fluid. . (oil supplied)	$ 65.00
Change power steering fluid. (fluid supplied)	$ 19.00
TOTAL	$ 454.00

Automotive Fundamentals
Hybrid Vehicle Technology
AUT 1110

Motor Vehicle Technology Center
OCC Auburn Hills Campus, A Building
Instructor: Prof. Harry A. Hildebrandt, 248.232.4204
Textbooks: *Modern Automotive Technology and Bosch Handbook*

Session	Topic
I	Review Safety Test Hydraulic Brakes & Energy Capture Systems
II	Alignment, Suspension and Steering (Includes Anti-Rollover System)
III	Introduction to Electrical (Includes 42-Volt System) Hybrid Vehicle Theory
IV	Electrical Components and Sensors A.B.S. - Drivetrain - A/C Systems Electric Hybrid Vehicle Fundamentals
V	Engines - Gas
VI	Driveability - Tune-Up
VII	Driveability and Emissions Performance
VIII	Automatic Transmissions & C.V.T.
IX	Manual Transmission
X	H.V.A.C. Systems
XI	Engine - Diesel & Bio -Diesel Fuel
XII	Transfer Cases and Final Drives Hydraulic - Electric - Fly Wheel Hybrids
XIII	Hybrid Vehicle Parallel & Series
XIV	Hybrid Vehicles - Fuel Cells
XV	Hybrid Vehicle Cost vs Efficiency

Course Outline

Week	Topic	Required Reading
session **1**	Introduction; course outline Review Safety Test	Chapter 5
session **2**	Hydraulic Brakes and Energy Capture Systems	Chapters 71-73
session **3**	Alignment, Suspension and Steering (Includes Anti-Rollover Systems) Lab	Chapters 65-70, 74
session **4**	Introduction to Electrical (includes 42 volt systems) Hybrid Vehicle Theory Lab	Chapters 8, 29-30, 79 Pages 1535-1538
session **5**	Electrical Sensors and Components A.B.S. – Drivetrain – A/C systems Electric Hybrid Vehicle Fundamentals Lab	Chapters 31-34, 37-38
session **6**	Engines – Gas Lab	Chapters 11-16, 48
session **7**	Drivability – Tune Up Lab	Chapters 17-18, 35-36
session **8**	Driveability and Emissions Performance **Mid-Semester Test** Lab	Chapters 43-47
session **9**	Automatic Transmissions and CVT Lab	Chapters 57-58
session **10**	Manual Transmissions Lab	Chapters 53-56
session **11**	HVAC systems Lab	Chapters 75-76
session **12**	Engine – Diesel and Bio Diesel Fuel Lab	Chapters 26-28
session **13**	Transfer Cases and Final Drives Hydraulic – Electric Flywheel Hybrids Lab	Chapters 59-64
session **14**	Hybrid Vehicle Parallel and Series, Fuel Cells Lab	Handouts
session **15**	Hybrid Vehicle Cost vs. Efficiency **Final Exam** **Hand In P.O. workbooks**	Handouts

(AUT) AUTOMOTIVE TECHNOLOGY

AUT 1110 ..... 4 Credits
Automotive Fundamentals

The students will identify major automotive systems, components, and tools. They will discuss automotive systems, components and tools using a standard automotive technical terminology. Development of the ability to efficiently use standard automotive tools and equipment will be emphasized during performance of basic automotive servicing procedures. Students will participate in a discussion of various automotive employment opportunities and analyze the job entry requirements for each. Course fee.

AUT 2120 ..... 4 Credits
Auto Fuel and Emission Systems

The students will identify and describe the operation of both fuel and emission system components. They will disassemble, clean, inspect, assemble and adjust fuel injectors. They will perform tests of vehicle emissions and service procedures that improve vehicle emission system performance or meet government emission system standards. Course fee.

AUT 2300 ..... 4 Credits
Computerized Automotive Systems

Prerequisite: AUT 1120 and AUT 2120 or ATA 130 and ATA 150 or consent of instructor.

The student will practice job entry skills in diagnosis and repair of vehicle electronic systems. Current computerized fuel injection, turbocharging, ignition, and other electronic systems will be featured. Work experience in removal, replacement and adjustment of components will be provided by assignment of malfunctioning vehicles to students. Course fee.

(ATA) AUTOMOBILE SERVICING

ATA 1100 ..... 4 Credits
Brake System Service

The student will develop the skills required to properly service the hydraulic brake system. Utilization of hands-on training and work experience on licensed vehicles developing saleable skills on the job entry-level. The student will rebuild or renew all components of current major automotive manufacturers' brake systems with an emphasis on safe and proper work habits and procedures. Course/lab fees.

ATA 1200 ..... 4 Credits
Front Suspension and Steering Service

The student will develop the skills required to properly service the front suspension and steering system of current model vehicles. A great portion of class time will be spent in the lab rebuilding or renewing all components of the suspension and steering systems. Wheel alignment measurement and correction will be performed by all students on all major automotive equipment, with an emphasis on safe and proper work habits and procedures. Course/lab fees.

ATA 1300 ..... 4 Credits
Automotive Electrical Systems Servicing

The student will develop the skills required to service the battery, cranking system, charging system and electrical accessories systems of all current major automobile manufacturers' vehicles. Theory of the systems as well as hands-on training will provide job entry-level skills for the student. Current manufacturers' specifications as well as safe and proper work habits and procedures will be emphasized. Course/lab fees.

ATA 1400 ..... 4 Credits
Engine Support Systems Servicing

General Education Attributes 3, 4, 7

The student will develop the skills required to properly service the engine fuel, lubrication, cooling, exhaust and valve systems. A great portion of the class time will be spent in the laboratory performing tests, as well as repairing and renewing major components of the above named systems. The student will make adjustments and replace components in accordance with manufacturers' specifications, with a major emphasis on developing safe and proper work habits and techniques. Course/lab fees.

ATA 1500 ..... 4 Credits
Engine Tune-Up and Emissions Service

General Education Attributes 3, 7, 10

The student will develop the skills required to properly tune an engine and diagnose the amount of emissions the engine produces. The student will also calibrate, make adjustments and renew or replace components of the ignition and emission systems in accordance with the manufacturers' specifications. Current ignition analysis equipment as well as infrared and other emissions measuring devices and equipment will be used in a safe and proper manner. Course/lab fees.

ATA 1600 ..... 4 Credits
Automatic Transmission Minor Servicing

The student will develop the skills required to perform service operations on all current major automobile manufacturers' automatic transmissions. A major portion of the class time will be spent in the laboratory performing tests, making adjustments, renewing or replacing various components of the transmissions. Manufacturers' specifications and procedures as well as safe and proper work habits will be greatly emphasized. Course/lab fees.

ATA 1700 ..... 4 Credits
Manual Transmissions and Rear Axle Servicing

The student will develop the skills required to service all current major automobile manufacturers' manual transmissions and rear axles. Servicing procedures will include diagnosis, removal and replacement and rebuilding of the clutch, transmission, driveshaft and the rear axle. Manufacturers' specifications and procedures as well as safe and proper work habits will be emphasized. Course/lab fees.

ATA 1800 ..... 4 Credits
Automotive Air Conditioning and Heating Service

The student will develop the skills required to service all major automobile manufacturers' current model heating and air conditioning systems. Theory of the systems as well as work-experience on licensed vehicles will be included. The student will develop entry-level job skills in diagnosing and repairing malfunctions in the systems, with an emphasis on safe and proper work habits and procedures. Course/lab fees.

REGISTRATION CODE	SECTION NUMBER	# OF WEEKS	START/END DATE	DAYS	TIMES	ROOM	INSTRUCTOR	FEES

AUTOMOBILE SERVICING (*continued*)

ATA-1800 Auto Air Cond./Heat Service ..... 4.0 Credits

Protective safety devices to be furnished by the students.

043084	A8203	8	06/30/08-08/18/08	MW	08:00AM-12:55PM	A203	Hildebrandt	$90
043085	A8204	8	06/30/08-08/18/08	MW	05:00PM-09:55PM	A203	Hildebrandt	$90

AUTOMOBILE SERVICING

ATA-1100 Brake System Service ..... 4.0 Credits

Protective safety devices to be furnished by the students.

043079	A8101	8	05/06/08-06/24/08	TTh	05:00PM-09:55PM	A203	Staff	$90

ATA-1200 Front Suspension/Steering Svc ..... 4.0 Credits

Protective safety devices to be furnished by the students.

043080	A8201	8	07/01/08-08/19/08	TTh	05:00PM-09:55PM	A203	Staff	$90

ATA-1300 Auto Electrical System Service ..... 4.0 Credits

Protective safety devices to be furnished by the students.

043997	A8104	8	05/05/08-06/25/08	MW	08:00AM-12:55PM	A203	Staff	$90
043081	A8102	8	05/06/08-06/24/08	TTh	05:00PM-09:55PM	A201	Staff	$90

ATA-1500 Engine Tune-up/Emissions Svc ..... 4.0 Credits

Protective safety devices to be furnished by the students.

043082	A8103	8	05/05/08-06/25/08	MW	05:00PM-09:55PM	A203	Hildebrandt	$90

DIESEL TRUCK TECHNOLOGY

DHE-1104 Diesel Engine Fund. ..... 4.0 Credits

Protective safety devices to be furnished by the students.

044335	A8101	8	05/06/08-06/24/08	TTh	05:00PM-09:55PM	A104	Staff	$90

DHE-1200 Tune-Up/Diagnosis ..... 4.0 Credits

Protective safety devices to be furnished by the students.

044336	A8201	8	07/01/08-08/19/08	TTh	05:00PM-09:55PM	A104	Staff	$90

An * indicates a prerequisite and/or a corequisite found in the current college catalog.

TECHNICAL INTERNSHIPS

IND-1403 Cooperative Internship ..... 3.0 Credits

042982	A8101	8	05/05/08-06/25/08	By Arrangement	Hildebrandt
042983	A8201	8	06/30/08-08/18/08	By Arrangement	Hildebrandt

IND-2403 Advanced Cooperative Internship ..... 3.0 Credits

Students must contact the Cooperative Education Office at 248.232.4140 to arrange their plan of work.

042984	A8102	8	05/05/08-06/25/08	By Arrangement	Hildebrandt
042985	A8202	8	06/30/08-08/18/08	By Arrangement	Hildebrandt

OAKLAND
COMMUNITY
COLLEGE

SYLLABUS
Driveability & Emission Service
ATA-1500
Room A – 203

Monday & Wednesday
Summer I 2008

INSTRUCTOR: Prof. Harry A. Hildebrandt
OFFICE: T-202
PHONE: (248) 232-4204 CELL: (313) 618-5922
EMAIL: HAHILDEB@OAKLANDCC.EDU
OFFICE HOURS: 3:00PM-5:00PM IN AUTO LAB ON TUESDAY & THURSDAY
ROOM: Auto Lab A - 200
Paraprofessional: Alice Degrandchamp (248) 232-4108
Department Secretary: Carole Baier (248) 232-4118

CATALOG COURSE DESCRIPTION:

THE STUDENT WILL DEVELOP THE SKILLS REQUIRED TO PROPERLY TROUBLESHOOT AND ANALYZE DRIVEABILITY AND EMISSION PROBLEMS RELATED TO PERFORMANCE, GAS MILEAGE, AND CATALYTIC CONVERTER EFFICIENCY. THE STUDENT WILL ALSO CALIBRATE, MAKE ADJUSTMENTS, AND RENEW OR REPLACE COMPONENTS OF THE IGNITION AND FUEL SYSTEM IN ACCORDANCE WITH THE MANUFACTURERS' SPECIFICATIONS. CURRENT SCAN TOOLS, LAPTOPS, AND IGNITION ANALYZER EQUIPMENT WILL BE USED AS WELL AS INFRARED AND OTHER EMISSION MEASURING DEVICES. MANUFACTURERS' SPECIFICATIONS AND PROCEDURES AS WELL AS SAFETY AND PROPER WORK HABITS WILL BE GREATLY EMPHASIZED. COURSE/LAB FEE.

COURSE GOALS:

All courses in the ATA Program are competency-based (C.B.) designed to accommodate two major objectives:

1) To provide you, the student, with the necessary knowledge of Motor Vehicle theory (testing and diagnosis), and proper repair procedures necessary to qualify you for an entry-level position in the Motor Vehicle Servicing or Engineering Technician industry.
2) To prepare you for successful accomplishment of a licensing test, which is required for all auto mechanics, by law, in the State of Michigan.

You must successfully complete a Safety Test before starting work. You will not be allowed to work in the lab if you are not wearing your safety glasses. Your safety glasses must be worn while procuring tools from the crib and any time you are in the lab. Tools will not be distributed unless you have your safety glasses on.

Each course provides the necessary knowledge and hands-on experience (70% performance) to begin a career as an entry-level technician. OCC has been teaching these courses successfully for over 20 years.

Students receiving a "B" or above in coursework will not have problems passing State licensing tests or national ASE certification tests. Also, these students will receive recommendations for employment from the Motor Vehicle Technology faculty. Employment available as co-op with helper permit immediately, or license after two classes.

To begin work, students will need a large tool chest or lower rollaway toolbox and approximately $1,500 in start-up tools. Once employment has begun, local tool suppliers will finance purchases for additional tools. All technicians own their own tools.

Opportunities for employment are high – any place in the U.S.A. – with extremely high concentration in Oakland, Wayne, Macomb, Genesee, and St. Clair Counties. Technicians can start as high as $10-$13 per hour, with opportunities to earn between $50,000-70,000/year after four years experience in this field.

For additional information please contact:
Prof. H.A. Hildebrandt (248) 232-4204 Fax (586) 779-3003

GRADING STANDARDS & PRACTICES:

All of the ATA courses are graded in the same manner.

- 70% of the grade is based on completion of 40 of the 54 listed P.O.'s (Perfromance Objectives), which are the competencies needed for each licensed area. The ten bolded P.O.'s must be included in the 40 P.O.'s you choose i.e. bolded P.O.'s are mandatory). P.O.'s must be turned in no later than the next class session to receive credit. All lab work must be completed in the OCC Auto Lab to receive credit for P.O.'s

- 30% of the grade is based on two examinations:

  - One Mid-Term Exam which is directed more toward theory;

  - One Final Exam on the last day of class which leans more toward troubleshooting problems and repair procedure. The Exam questions are similar in structure to the questions on the State of Michigan and A.S.E. tests.

The following scale will apply to the Performance Objectives Percentage and Examination Percentage.

94 – 100% = A
87 – 93% = B
80 – 86% = C
75 – 79% = D
0 – 74% = F

TEXTBOOK AND SUPPLIES:

Today's Technician Advanced Engine Performance Classroom Manual – Mark Schnubel

ANY PARTS YOU NEED FOR REPAIRS, AND FOR ANY SUSPENSION SERVICE REPAIR PARTS ON YOUR VEHICLE

REQUIRED TOOLS:

All tools and special equipment are provided for lab activities. Students will be required to provide their own tools to become employed. They will be given a list of recommended basic tools and tool box. Snap-On Tool Company offers a special 50% one-time discount for students enrolled in college automotive programs. The Industrial Education representative will make a presentation to the class.

AUBURN HILLS CAMPUS COUNSELING:

B-BUILDING, ROOM B - 238

Auburn Hills Counseling

2900 Featherstone Road, Auburn Hills, MI 48326-2845, Building B, 2nd floor, Room 238

Counseling Office	(248) 232-4350	Hours:	
Fax	(248) 232-4355	Monday-Thursday	8:30 am - 8:00 pm
COMPASS Appointments	(248) 232-4436	Friday	8:30 am - 5:00 pm

Full-Time Counselors		Adjunct Counselors	Support Staff
Name	Office	Sarah Abraham	Susan Mamros
Charlie Kurzer, Department Chair	B-239	C. Renee Henson	Anna Bouchard
Verna Love	B-226	Rhonda Gaines	
Pat Shipp May	B-229	Rose Gooley	
Gail Mays	B-228	Jan Janks	
Pat Nowaczynski	B-235	Cindy Kozak	
Carlos Olivarez	B-237		
Alicia Paramo-Dionne	B-233		
Douglas Riddering	B-231		

If you have questions that resemble issues discussed in a counseling appointment, you should call (248) 232-4350 to schedule an appointment with an Auburn Hills counselor. If you have questions that are brief and allow for a short response, you may click on the link to e-mail your question to an Auburn Hills counselor.

AUBURN HILLS CAMPUS ACADEMIC SUPPORT CENTER:

B-Building, Room B - 110

ASC Hours - Academic Year 2007-2008				
Session	***Fall***	***Winter***	***Summer I***	***Summer II***
Dates	August 30 - Dec.17	Jan.7 - April 28	May 5 - June 25	June 30 - August 19
Days	***Hours***	***Hours***	***Hours***	***Hours***
Mon-Thu	8:30am-7:00pm	8:30am-7:00pm	8:30am-7:00pm	8:30am-7:00pm
Friday	8:30am-4:30pm	8:30am-4:30pm	8:30am-4:30pm	8:30am-4:30pm
Saturday	10:00am-2:00pm	10:00am-2:00pm	10am-2:pm	Closed

WITHDRAWALS:

If, during the course of the semester, a student decides to withdraw from the course, for whatever reason, the student must fill out the appropriate form in the counseling office, in order to receive the mark "W." Students who simply stop attending will receive a final grade of "F." ." Last Day to drop this class is the Friday of 12th week of instruction.

ADA NOTIFICATION:

Students requiring special assistance (including those affected by the American with Disabilities Act) should contact the PASS office, which will inform the instructor of any special conditions to the student's learning.

SUBJECT-TO-CHANGE NOTIFICATION:

Occasionally, necessary deviations from the syllabus may occur, and will always be announced by the instructor in class.

AUBURN HILLS CAMPUS
SCHEDULE OF SERVICE HOURS

AUBURN HILLS CAMPUS
SCHEDULE OF SERVICE HOURS

SUMMER I 2008
(Hours Subject to change)

Department	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Admissions **Business Office** **Financial Aid** **Records** **Registration**	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-5:00pm	Closed
Bookstore (Refer to Schedule for extended hours)	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-5:00pm	Closed
Cafeteria	Closed	Closed	Closed	Closed	Closed	Closed
Children's Center	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:00pm	Closed
Counseling	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-5:00pm	Closed
Department/Faculty Secretaries	8:30am-5:00pm[1]	8:30am-5:00pm[1]	8:30am-5:00pm[1]	8:30am-5:00pm[1]	8:30am-5:00pm[1]	Closed
Health and PE Building	9:00am-9:30pm	9:00am-9:30pm	9:00am-9:30pm	9:00am-9:30pm	9:00am-9:30pm	9:00am-3:00pm
Academic Support Center COMPASS testing-Refer to ASC Flyer	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-4:30pm	10:00am-2:00pm
International Student Advisor Walk-in Hours	9:30am-11:30am 1:30pm-4:30pm[2]	9:30am-11:30am 1:30pm-4:30pm[2]	9:30am-11:30am 1:30pm-4:30pm[2]	9:30am-11:30am 1:30pm-4:30pm[2]	By special arrangement[2]	Closed
Java Cart	8:00am-8:00pm	8:00am-8:00pm	8:00am-8:00pm	8:00am-8:00pm	Closed	Closed
Library	8:00am-10:00pm	8:00am-10:00pm	8:00am-10:00pm	8:00am-10:00pm	8:00am-4:30pm	9:00am-3:00pm
PASS	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	Closed
Veterans Affairs Office	9:30am-5:30pm	9:30am-6:00pm	9:30am-5:30pm	9:30am-6:00pm	Closed	Closed

[1] - Varies by department
[2] - Office hours are 8:30am-5:00pm. No support staff, so shortened walk-in hours are required to complete immigration work.

ATA 1500
INTRODUCTION TO DRIVEABILITY AND EMISSIONS
COURSE DESCRIPTION AND PERFORMANCE OBJECTIVES
Developed by Prof. H. A. Hildebrandt
Automotive Technology Servicing or Engineering Technician

ATA 1500 PERFORMANCE OBJECTIVES

1. Analyze and adjust engine performance using engine analyzer and scan tools.
2. Evaluate and make circuit test to determine reason for trouble codes.
3. Perform cylinder compression test.
4. Perform cylinder balance test.
5. Perform cylinder leakage test.
6. Test spark plugs.
7. Test, repair and adjust distributor controls.
8. Inspect, test, and repair or replace primary ignition components.
9. Inspect ignition switch, resistor, wiring and coil of the primary circuit.
10. Test and recondition or replace the parts of the secondary circuit of the ignition system.
11. Inspect secondary circuit lead wires, distributor cap and rotor. Measure resistance in secondary wires.
12. Test and/or replace electronic spark advance systems.
13. Test and/or repair vacuum and centrifugal spark advance systems.
14. Diagnose distributor advance curves and adjust or modify per manufacturers' specifications.
15. Overhaul distributor.
16. Test and repair distribution pick-up coils.
17. Test and repair electronic ignition systems.
18. Test and repair distributorless ignition systems.

19. Set ignition timing.

20. Test and repair Multiport fuel delivery systems.

21. Adjust carburetor.

22. Test and repair T. B. I. fuel delivery system.

23. Inspect, service or replace carburetor air cleaner.

24. Inspect, clean and adjust choke unit (automatic and manual).

25. Service or repair manifold heat controls.

26. Measure fuel flow and pressure.

27. Analyze the operation of the cranking system.

28. Evaluate alternator/generator output.

29. Perform four-gas analysis of exhaust emission control system.

30. Perform five-gas analysis of exhaust emission control system.

31. Test and repair the air injection reaction system.

32. Conduct five-minute vacuum test on evaporative emission system.

33. Test and repair evaporative emission control system.

34. Use smoke machine to find leak.

35. Test and repair exhaust gas recirculation system.

36. Test and repair heated air intake system.

37. Remove and replace fuel pump (mechanical, electrical or in tank electrical).

38. Repair or replace fuel lines and hoses.

39. Repair or service carburetors.

40. Overhaul carburetors.

41. Adjust throttle linkage.

42. Replace fuel filter.

43. Analyze for moisture or foreign particle level in fuel

system.

44. Replace gas tank sending unit.

45. Adjust linkage from engine to automatic transmission.

46. Test and repair cruise control units.

47. Test back pressure vacuum gage procedure.

48. Diagnose exhaust leaks.

49. Replace exhaust manifold(s); install new gaskets.

50. Test and replace thermostat.

51. Chemically clean and flush cooling system.

52. Adjust valves.

53. Remove and replace valve cover gaskets.

54. Replace or adjust neutral safety switch.

55. Diagnose valve train and head malfunctions.

56. Replace generators and alternators.

57. Test cam shaft lift and duration for each cylinder.

ATA 1500 - Driveability & Emission Service
Course Schedule

Session	Date	Material to be Covered	Reading / Homework
1		Overview Performance Objectives Safety and Safety Test	Chapter 1 Chapter 2
2		Engine Operating Principles Basic Electrical Review LAB	Chapter 3
3		Ignition Systems (Electronic) Battery, Charging, and Starting Systems Ignition Timing and Spark Control	Hand-Out
4		Driveability Testing Equipment Ignition Systems Electronic Engine Testing (Compression) Vacuum Test LAB	Chapter 4
5		Cam Lift and Duration Cylinder Balance Fuel Requirements LAB	Hand-Out
6		The Fuel System Pressure Differential Fuel Pumps, Carburetor Carburetor Operating System LAB	Hand-Out
7		Carburetor Circuits Feedback Control Carburetors LAB	Hand-Out Chapter 7
8		Fuel Injection Systems T.B.I. (Throttle-Body Injector) Multi-Port LAB	MID-SEMESTER EXAM Chapter 7
9		Electronic Engine Management Computer Function LAB	Chapter 6
10		Electronic Engine Control Systems LAB	Chapter 5
11		Supercharging and Turbocharging LAB	Hand-Out
12		Emission Control Systems Air Injection Catalytic Converters LAB	Chapter 8 Chapter 9
13		Dyno-Testing LAB	Chapter 10 Chapter 11
14		Review LAB	
15		FINAL EXAM	

OAKLAND
COMMUNITY
COLLEGE

SYLLABUS
Automatic Transmission Rebuilding
ATA-1600
Room A – 203

Mondays
Winter 2008

INSTRUCTOR: Prof. Harry A. Hildebrandt
OFFICE: T-202
PHONE: (248) 232-4204 CELL: (313) 618-5922
EMAIL: HAHILDEB@OAKLANDCC.EDU
OFFICE HOURS: 3:00PM-5:00PM IN AUTO LAB ON TUESDAY & THURSDAY
ROOM: Auto Lab A - 200
Paraprofessional: Alice Degrandchamp (248) 232-4108
Department Secretary: Carole Baier (248) 232-4118

CATALOG COURSE DESCRIPTION:

THE STUDENT WILL DEVELOP THE SKILLS REQUIRED TO PERFORM REBUILDING OPERATIONS ON HYDROMECHANICAL, ELECTROHYDROMECHANICAL, AND CONSTANT VARIABLE TORQUE TRANSMISSIONS. A PORTION OF CLASS TIME WILL BE SPENT IN THE LAB PERFORMING DIAGNOSTIC TESTS, MAKING ADJUSTMENTS, RENEWING OR REPLACING VARIOUS COMPONENTS, AND REMOVING AND INSTALLING TRANSMISSIONS AND TRANSAXLES FROM VEHICLES. MANUFACTURERS SPECIFICATIONS' AND PROCEDURES AS WELL AS SAFE AND PROPER WORK HABITS WILL BE GREATLY EMPHASIZED. COURSE/LAB FEE.

COURSE GOALS:

All courses in the ATA Program are competency-based (C.B.) designed to accommodate two major objectives:

1) To provide you, the student, with the necessary knowledge of Motor Vehicle theory (testing and diagnosis), and proper repair procedures necessary to qualify you for an entry-level position in the Motor Vehicle Servicing or Engineering Technician industry.
2) To prepare you for successful accomplishment of a licensing test, which is required for all auto mechanics, by law, in the State of Michigan.

You must successfully complete a Safety Test before starting work. You will not be allowed to work in the lab if you are not wearing your safety glasses. Your safety glasses must be worn while procuring tools from the crib and any time you are in the lab. Tools will not be distributed unless you have your safety glasses on.

Each course provides the necessary knowledge and hands-on experience (70% performance) to begin a career as an entry-level technician. OCC has been teaching these courses successfully for over 20 years.

Students receiving a "B" or above in coursework will not have problems passing State licensing tests or national ASE certification tests. Also, these students will receive recommendations for employment from the Motor Vehicle Technology faculty. Employment available as co-op with helper permit immediately, or license after two classes.

To begin work, students will need a large tool chest or lower rollaway toolbox and approximately $1,500 in start-up tools. Once employment has begun, local tool suppliers will finance purchases for additional tools. All technicians own their own tools.

Opportunities for employment are high – any place in the U.S.A. – with extremely high concentration in Oakland, Wayne, Macomb, Genesee, and St. Clair Counties. Technicians can start as high as $10-$13 per hour, with opportunities to earn between $50,000-70,000/year after four years experience in this field.

For additional information please contact:
Prof. H.A. Hildebrandt (248) 232-4204 Fax (586) 779-3003

GRADING STANDARDS & PRACTICES:

All of the ATA courses are graded in the same manner.

70% of the grade is based on completion of 40 of the 54 listed P.O.'s (Perfromance Objectives), which are the competencies needed for each licensed area. The ten bolded P.O.'s must be included in the 40 P.O.'s you choose i.e. bolded P.O.'s are mandatory). P.O.'s must be turned in no later than the next class session to receive credit. All lab work must be completed in the OCC Auto Lab to receive credit for P.O.'s

30% of the grade is based on two examinations:

One Mid-Term Exam which is directed more toward theory;

One Final Exam on the last day of class which leans more toward troubleshooting problems and repair procedure. The Exam questions are similar in structure to the questions on the State of Michigan and A.S.E. tests.

The following scale will apply to the Performance Objectives Percentage and Examination Percentage.

94 – 100% = A
87 – 93% = B
80 – 86% = C
75 – 79% = D
0 – 74% = F

TEXTBOOK AND SUPPLIES:

TechOne Automatic Transmissions – Jack Erjavec

ANY PARTS YOU NEED FOR REPAIRS, AND FOR ANY SUSPENSION SERVICE REPAIR PARTS ON YOUR VEHICLE

REQUIRED TOOLS:

All tools and special equipment are provided for lab activities. Students will be required to provide their own tools to become employed. They will be given a list of recommended basic tools and tool box. Snap-On Tool Company offers a special 50% one-time discount for students enrolled in college automotive programs. The Industrial Education representative will make a presentation to the class.

AUBURN HILLS CAMPUS COUNSELING:

B-BUILDING, ROOM B - 238

Auburn Hills Counseling

2900 Featherstone Road, Auburn Hills, MI 48326-2845, Building B, 2nd floor, Room 238

Counseling Office	(248) 232-4350	Hours:	
Fax	(248) 232-4355	Monday-Thursday	8:30 am - 8:00 pm
COMPASS Appointments	(248) 232-4436	Friday	8:30 am - 5:00 pm

Full-Time Counselors		Adjunct Counselors	Support Staff
Name	Office	Sarah Abraham	Susan Mamros
Charlie Kurzer, Department Chair	B-239	C. Renee Henson	Anna Bouchard
Verna Love	B-226	Rhonda Gaines	
Pat Shipp May	B-229	Rose Gooley	
Gail Mays	B-228	Jan Janks	
Pat Nowaczynski	B-235	Cindy Kozak	
Carlos Olivarez	B-237		
Alicia Paramo-Dionne	B-233		
Douglas Riddering	B-231		

If you have questions that resemble issues discussed in a counseling appointment, you should call (248) 232-4350 to schedule an appointment with an Auburn Hills counselor. If you have questions that are brief and allow for a short response, you may click on the link to e-mail your question to an Auburn Hills counselor.

AUBURN HILLS CAMPUS ACADEMIC SUPPORT CENTER:

B-Building, Room B - 110

ASC Hours - Academic Year 2007-2008				
Session	***Fall***	***Winter***	***Summer I***	***Summer II***
Dates	August 30 - Dec.17	Jan.7 - April 28	May 5 - June 25	June 30 - August 19
Days	***Hours***	***Hours***	***Hours***	***Hours***
Mon-Thu	8:30am-7:00pm	8:30am-7:00pm	8:30am-7:00pm	8:30am-7:00pm
Friday	8:30am-4:30pm	8:30am-4:30pm	8:30am-4:30pm	8:30am-4:30pm
Saturday	10:00am-2:00pm	10:00am-2:00pm	10am-2:pm	Closed

WITHDRAWALS:

If, during the course of the semester, a student decides to withdraw from the course, for whatever reason, the student must fill out the appropriate form in the counseling office, in order to receive the mark "W." Students who simply stop attending will receive a final grade of "F." ." Last Day to drop this class is the Friday of 12th week of instruction.

ADA NOTIFICATION:

Students requiring special assistance (including those affected by the American with Disabilities Act) should contact the PASS office, which will inform the instructor of any special conditions to the student's learning.

SUBJECT-TO-CHANGE NOTIFICATION:

Occasionally, necessary deviations from the syllabus may occur, and will always be announced by the instructor in class.

AUBURN HILLS CAMPUS
SCHEDULE OF SERVICE HOURS

AUBURN HILLS CAMPUS
SCHEDULE OF SERVICE HOURS

WINTER 2008
(Hours Subject to change)

Department	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Admissions **Business Office** **Financial Aid** **Records** **Registration**	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-5:00pm	Closed
Bookstore (Refer to Schedule for extended hours)	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-5:00pm	Closed
Cafeteria	Closed	Closed	Closed	Closed	Closed	Closed
Children's Center	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:00pm	Closed
Counseling	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-5:00pm	Closed
Department/Faculty Secretaries	8:30am-5:00pm[1]	8:30am-5:00pm[1]	8:30am-5:00pm[1]	8:30am-5:00pm[1]	8:30am-5:00pm[1]	Closed
Health and PE Building	9:00am-9:30pm	9:00am-9:30pm	9:00am-9:30pm	9:00am-9:30pm	9:00am-9:30pm	9:00am-3:00pm
Academic Support Center COMPASS testing-Refer to ASC Flyer	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-4:30pm	10:00am-2:00pm
International Student Advisor Walk-in Hours	9:30am-11:30am 1:30pm-4:30pm[2]	9:30am-11:30am 1:30pm-4:30pm[2]	9:30am-11:30am 1:30pm-4:30pm[2]	9:30am-11:30am 1:30pm-4:30pm[2]	By special arrangement[2]	Closed
Java Cart	8:00am-8:00pm	8:00am-8:00pm	8:00am-8:00pm	8:00am-8:00pm	Closed	Closed
Library	8:00am-10:00pm	8:00am-10:00pm	8:00am-10:00pm	8:00am-10:00pm	8:00am-4:30pm	9:00am-3:00pm
PASS	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	Closed
Veterans Affairs Office	9:30am-5:30pm	9:30am-6:00pm	9:30am-5:30pm	9:30am-6:00pm	Closed	Closed

[1] - Varies by department
[2] - Office hours are 8:30am-5:00pm. No support staff, so shortened walk-in hours are required to complete immigration work.

ATA 1600 PERFORMANCE OBJECTIVES

1. Change automatic transmission fluid and filter.
2. Pressure test automatic transmission.
3. Check and add fluid to proper level.
4. Lubricate or replace speedometer cable and housing.
5. Test and replace V.S.S. (electronic buffer).
6. Replace speedometer drive gear.
7. Replace speedometer buffer gear.
8. Inspect driveshaft, U-joints and center bearings.
9. Adjust electrical kick-down switch.
10. Replace or adjust neutral safety switch, relays (Chrysler).
11. Adjust, repair or replace back-up light switch.
12. Remove and replace transmission mounts.
13. Replace universal joints.
14. Repair (FWD) universal and boots.
15. Install automatic transmission cooler (external type).
16. Diagnose cooler problems.
17. Clean cooler system.
18. Install return line filter.
19. Inspect and repair transmission cooling system.
20. Repair minor leaks.
21. Road test car for noise diagnosis.
22. Perform operational tests on automatic transmission.

23. Stall and oil pressure test transmission.

24. Disassemble, clean and visually inspect transmission.

25. Make band adjustments (internal or external).

26. Diagnose, replace or adjust modulators.

27. Replace external seals, gaskets and lines on automatic transmissions.

28. Replace flywheel and flywheel ring gear.

29. Remove and replace housing, bushings and seal.

30. Overhaul automatic transmission (GM, Ford, Chrysler & foreign cars).

31. Diagnose and clean valve body.

32. Inspect, remove and replace converter.

33. Check converter removed from car.

34. Flush converter.

35. Remove and replace bushings.

36. Inspect and replace front pump, seal and bushings.

37. Diagnose and repair governor.

38. Diagnose planetary gear assembly.

39. Diagnose and remove and replace over-running sprag.

40. Install automatic transmissions (FWD or RWD).

41. Perform operational test on repaired transmission via a road test or other performance test.

ATA 1600
Automatic Transmissions Rebuilding and Repair
Course Schedule

Session	Date	Material to be Covered	Reading / Homework
1		Overview Performance Objectives Safety and Safety Test	Chapter 1 Chapter 2 Chapter 3
2		Power, Torque, Efficiency Torque Converters Torque Multiplication (Gear System)	Chapter 6 Chapters 9 & 10 Chapter 24
3		Hydraulic Control System Hydro-Mechanical Computers Electro-Hydraulic Computers	Chapter 11 Chapter 12
4		Disassembly and Inspection of Automatic Transmissions LAB	Chapter 30 Chapter 31 Chapter 32
5		Clutches and Bands Hydraulics Pressure Testing LAB	Chapter 5 Chapter 13
6		Basic Hydraulics Hydraulic System LAB	Chapter 23
7		Assembly Procedure and Checks LAB	Chapter 36
8		LAB	
9		LAB	MID-SEMESTER EXAM
10		R & R RWD Transmission LAB	Chapters 28-37
11		R & R FWD Transaxle LAB	Chapters 28-37
12		Diagnosis - Power Flow Problems LAB	Chapters 14-16
		LAB	
14		Review LAB	
15		FINAL EXAM	

OAKLAND
COMMUNITY
COLLEGE

SYLLABUS
Manual Transmissions thru Rear Axles
ATA-1700
Room A – 203

Tuesdays
Winter 2008

INSTRUCTOR: Prof. Harry A. Hildebrandt
OFFICE: T-202
PHONE: (248) 232-4204 CELL: (313) 618-5922
EMAIL: HAHILDEB@OAKLANDCC.EDU
OFFICE HOURS: 3:00PM-5:00PM IN AUTO LAB ON TUESDAY & THURSDAY
ROOM: Auto Lab A - 200
Paraprofessional: Alice Degrandchamp (248) 232-4108
Department Secretary: Carole Baier (248) 232-4118

CATALOG COURSE DESCRIPTION:

THE STUDENT WILL DEVELOP THE SKILLS REQUIRED TO PERFORM REBUILDING AND SERVICE OPERATIONS ON ALL CURRENT MAJOR AUTOMOTIVE AND LIGHT TRUCKS, MANUAL TRANSMISSIONS, TRANSFER CASES, FINAL DRIVES, HALF SHAFTS, AND DRIVE SHAFTS. SERVICING PROCEDURES WILL INCLUDE DIAGNOSIS, REMOVAL AND REPLACEMENT, AND REBUILDING OF THE CLUTCH AND THE CLUTCH HYDRAULIC APPLY SYSTEM. MANUFACTURERS SPECIFICATIONS' AND PROCEDURES AS WELL AS SAFE AND PROPER WORK HABITS WILL BE GREATLY EMPHASIZED. COURSE/LAB FEE.

COURSE GOALS:

All courses in the ATA Program are competency-based (C.B.) designed to accommodate two major objectives:

1) To provide you, the student, with the necessary knowledge of Motor Vehicle theory (testing and diagnosis), and proper repair procedures necessary to qualify you for an entry-level position in the Motor Vehicle Servicing or Engineering Technician industry.
2) To prepare you for successful accomplishment of a licensing test, which is required for all auto mechanics, by law, in the State of Michigan.

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For additional information please contact:
Prof. H.A. Hildebrandt (248) 232-4204 Fax (586) 779-3003

GRADING STANDARDS & PRACTICES:

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70% of the grade is based on completion of 40 of the 54 listed P.O.'s (Perfromance Objectives), which are the competencies needed for each licensed area. The ten bolded P.O.'s must be included in the 40 P.O.'s you choose i.e. bolded P.O.'s are mandatory). P.O.'s must be turned in no later than the next class session to receive credit. All lab work must be completed in the OCC Auto Lab to receive credit for P.O.'s

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One Mid-Term Exam which is directed more toward theory;

One Final Exam on the last day of class which leans more toward troubleshooting problems and repair procedure. The Exam questions are similar in structure to the questions on the State of Michigan and A.S.E. tests.

The following scale will apply to the Performance Objectives Percentage and Examination Percentage.

94 – 100% = A
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80 – 86% = C
75 – 79% = D
0 – 74% = F

TEXTBOOK AND SUPPLIES:

Today's Technician - Manual Transmissions & Transaxles, 2nd edition, Classroom Manual – Jack Erjavec

ANY PARTS YOU NEED FOR REPAIRS, AND FOR ANY SUSPENSION SERVICE REPAIR PARTS ON YOUR VEHICLE

REQUIRED TOOLS:

All tools and special equipment are provided for lab activities. Students will be required to provide their own tools to become employed. They will be given a list of recommended basic tools and tool box. Snap-On Tool Company offers a special 50% one-time discount for students enrolled in college automotive programs. The Industrial Education representative will make a presentation to the class.

AUBURN HILLS CAMPUS COUNSELING:

B-BUILDING, ROOM B - 238

Auburn Hills Counseling

2900 Featherstone Road, Auburn Hills, MI 48326-2845, Building B, 2nd floor, Room 238

Counseling Office	(248) 232-4350	Hours:	
Fax	(248) 232-4355	Monday-Thursday	8:30 am - 8:00 pm
COMPASS Appointments	(248) 232-4436	Friday	8:30 am - 5:00 pm

Full-Time Counselors		Adjunct Counselors	Support Staff
Name	Office	Sarah Abraham	Susan Mamros
Charlie Kurzer, Department Chair	B-239	C. Renee Henson	Anna Bouchard
Verna Love	B-226	Rhonda Gaines	
Pat Shipp May	B-229	Rose Gooley	
Gail Mays	B-228	Jan Janks	
Pat Nowaczynski	B-235	Cindy Kozak	
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Alicia Paramo-Dionne	B-233		
Douglas Riddering	B-231		

If you have questions that resemble issues discussed in a counseling appointment, you should call (248) 232-4350 to schedule an appointment with an Auburn Hills counselor. If you have questions that are brief and allow for a short response, you may click on the link to e-mail your question to an Auburn Hills counselor.

AUBURN HILLS CAMPUS ACADEMIC SUPPORT CENTER:

B-Building, Room B - 110

ASC Hours - Academic Year 2007-2008				
Session	***Fall***	***Winter***	***Summer I***	***Summer II***
Dates	August 30 - Dec.17	Jan.7 - April 28	May 5 - June 25	June 30 - August 19
Days	***Hours***	***Hours***	***Hours***	***Hours***
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Saturday	10:00am-2:00pm	10:00am-2:00pm	10am-2:pm	Closed

WITHDRAWALS:

If, during the course of the semester, a student decides to withdraw from the course, for whatever reason, the student must fill out the appropriate form in the counseling office, in order to receive the mark "W." Students who simply stop attending will receive a final grade of "F." ." Last Day to drop this class is the Friday of 12th week of instruction.

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Students requiring special assistance (including those affected by the American with Disabilities Act) should contact the PASS office, which will inform the instructor of any special conditions to the student's learning.

SUBJECT-TO-CHANGE NOTIFICATION:

Occasionally, necessary deviations from the syllabus may occur, and will always be announced by the instructor in class.

AUBURN HILLS CAMPUS
SCHEDULE OF SERVICE HOURS

AUBURN HILLS CAMPUS
SCHEDULE OF SERVICE HOURS

WINTER 2008
(Hours Subject to change)

Department	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Admissions **Business Office** **Financial Aid** **Records** **Registration**	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-5:00pm	Closed
Bookstore (Refer to Schedule for extended hours)	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-5:00pm	Closed
Cafeteria	Closed	Closed	Closed	Closed	Closed	Closed
Children's Center	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:00pm	Closed
Counseling	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-5:00pm	Closed
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Health and PE Building	9:00am-9:30pm	9:00am-9:30pm	9:00am-9:30pm	9:00am-9:30pm	9:00am-9:30pm	9:00am-3:00pm
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International Student Advisor Walk-in Hours	9:30am-11:30am 1:30pm-4:30pm[2]	9:30am-11:30am 1:30pm-4:30pm[2]	9:30am-11:30am 1:30pm-4:30pm[2]	9:30am-11:30am 1:30pm-4:30pm[2]	By special arrangement[2]	Closed
Java Cart	8:00am-8:00pm	8:00am-8:00pm	8:00am-8:00pm	8:00am-8:00pm	Closed	Closed
Library	8:00am-10:00pm	8:00am-10:00pm	8:00am-10:00pm	8:00am-10:00pm	8:00am-4:30pm	9:00am-3:00pm
PASS	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	Closed
Veterans Affairs Office	9:30am-5:30pm	9:30am-6:00pm	9:30am-5:30pm	9:30am-6:00pm	Closed	Closed

[1] - Varies by department
[2] - Office hours are 8:30am-5:00pm. No support staff, so shortened walk-in hours are required to complete immigration work.

ATA 1700
MANUAL TRANSMISSIONS, FINAL DRIVES, THEORY, AND REBUILDING
COURSE DESCRIPTION AND PERFORMANCE OBJECTIVES
Automotive Technology Servicing or Engineering Technician
Developed by Prof. H. A. Hildebrandt

ATA 1700 PERFORMANCE OBJECTIVES

1. Inspect the transmission, transfer case and front and rear differential for proper lubricant type and level.
2. Remove and replace manual transmission and transfer case mounts.
3. Replace manual transmission rear seal and transfer case gasket and bushings.
4. Remove and replace extension housing seal and bushing.
5. Inspect driveshaft, U-joints, and center bearings.
6. Replace universal joints.
7. Remove and replace leaf springs and spring shackles.
8. Repair hydraulic-type clutch.
9. Lubricate or replace speedometer cable and housing.
10. Test and replace V.S.S. (buffer).
11. Adjust, repair or replace back-up light switch.
12. Adjust, repair or replace transfer case switch.
13. Replace speedometer drive gear.
14. Adjust clutch pedal linkage.
15. Adjust column and floor mounted shift linkage.
16. Test manual transmission operation.
17. Replace manual transmission.
18. Rebuild manual transmission.
19. Remove, inspect and replace clutch release bearings (throw out bearings).
20. Remove, inspect and replace clutch assembly.

21. Analyze and repair electrical control circuit and components for overdrive unit.

22. Rebuild overdrive unit.

23. Replace pilot bearing.

24. Replace mechanical-type clutch.

25. Reface flywheel (on lathe).

26. Replace flywheel and flywheel ring gear.

27. Reface flywheel (with centerless grinder).

28. Diagnose differential malfunctions (front and rear).

29. Repair, replace or adjust front and rear final drive axle assemblies.

30. Replace rear axle shaft, bearing and seal.

31. Repair or replace differential.

32. Repair or replace differential spider gears.

33. Remove, inspect and replace pinion seals and sealing surfaces.

34. Overhaul carrier assembly.

35. Repair rear suspension system.

36. Replace rear suspension systems.

37. Adjust brakes.

38. Remove, replace, clean, repack and adjust front wheel bearings and seals (RWD).

39. Remove, replace, clean, repack and adjust rear wheel bearings and seals (FWD).

40. Remove, replace, clean, repack and adjust front wheel bearings (four-wheel drive).

41. Repair rear axle shafts and seals (heavy-duty, one-ton full floating type).

ATA 1700
Manual Transmissions
Final Drives, Transfer Cases, and Drive Shafts
Course Schedule

Session	Date	Material to be Covered	Reading / Homework
1		Overview Performance Objectives Safety and Safety Test	Chapter 1 Hand-Outs
2		Power, Torque, Efficiency Flywheels and Clutches Torque Multiplication (Gear System)	Chapter 2
3		Basic Principles of Counter Shaft Transmissions Synchronizer Principles and Operations LAB	Chapter 4
4		Clutch Replacement Transmission Removal FWD, RWD, AWD LAB	Chapter 3
5		Disassembly and Inspection of 3-, 4-, or 5-Speed Transmissions LAB	Chapter 4 Hand-Outs
6		Assemble and Clearance Checks 3-, 4-, or 5-Speed Transmissions LAB	Chapter 4 Hand-Outs
7		Transaxles Transmission Linkage LAB	Chapter 8
8		Transfer Cases LAB	Chapter 8 Hand-Out
9		AWD LAB	MID-SEMESTER EXAM
10		Rear Axle Construction and Principles LAB	Chapter 7
11		Rear Axle Disassembly, Inspection, Set-Up, and Reassembly LAB	Chapter 7
12		Driveshaft and Universal Repair Both FWD and RWD	Chapters 5 & 6
13		LAB	Chapter 9
14		Review LAB	
15		FINAL EXAM	

OAKLAND
COMMUNITY
COLLEGE

SYLLABUS
Automotive & Recreational Vehicle HVAC
ATA-1800
Room A – 203

Monday & Wednesday
Summer II 2008

INSTRUCTOR: Prof. Harry A. Hildebrandt
OFFICE: T-202
PHONE: (248) 232-4204 CELL: (313) 618-5922
EMAIL: HAHILDEB@OAKLANDCC.EDU
OFFICE HOURS: 3:00PM-5:00PM IN AUTO LAB ON TUESDAY & THURSDAY
ROOM: Auto Lab A - 200
Paraprofessional: Alice Degrandchamp (248) 232-4108
Department Secretary: Carole Baier (248) 232-4118

CATALOG COURSE DESCRIPTION:

THE STUDENT WILL DEVELOP THE SKILLS REQUIRED TO SERVICE ALL MAJOR AUTOMOTIVE AND RECREATIONAL VEHICLES, REFRIGERATED TRANSPORT UNITS, AND ALL MOTOR VEHICLE MANUFACTURERS' CURRENT MODEL HEATING, AIR CONDITIONING, AND MOBILE REFRIGERATION SYSTEMS. THEORY OF THE SYSTEMS AS WELL AS WORK EXPERIENCE ON HVAC AND REFRIGERATION SYSTEMS WILL BE INCLUDED. THE STUDENTS WILL DEVELOP ENTRY LEVEL JOB SKILLS IN DIAGNOSING AND REPAIRING MALFUNCTIONS IN THE SYSTEMS WITH AN EMPHASIS ON SAFETY. MANUFACTURERS SPECIFICATIONS' AND PROCEDURES AS WELL AS SAFE AND PROPER WORK HABITS WILL BE GREATLY EMPHASIZED. COURSE/LAB FEE.

COURSE GOALS:

All courses in the ATA Program are competency-based (C.B.) designed to accommodate two major objectives:

1) To provide you, the student, with the necessary knowledge of Motor Vehicle theory (testing and diagnosis), and proper repair procedures necessary to qualify you for an entry-level position in the Motor Vehicle Servicing or Engineering Technician industry.
2) To prepare you for successful accomplishment of a licensing test, which is required for all auto mechanics, by law, in the State of Michigan.

You must successfully complete a Safety Test before starting work. You will not be allowed to work in the lab if you are not wearing your safety glasses. Your safety glasses must be worn while procuring tools from the crib and any time you are in the lab. Tools will not be distributed unless you have your safety glasses on.

Each course provides the necessary knowledge and hands-on experience (70% performance) to begin a career as an entry-level technician. OCC has been teaching these courses successfully for over 20 years.

Students receiving a "B" or above in coursework will not have problems passing State licensing tests or national ASE certification tests. Also, these students will receive recommendations for employment from the Motor Vehicle Technology faculty. Employment available as co-op with helper permit immediately, or license after two classes.

To begin work, students will need a large tool chest or lower rollaway toolbox and approximately $1,500 in start-up tools. Once employment has begun, local tool suppliers will finance purchases for additional tools. All technicians own their own tools.

Opportunities for employment are high – any place in the U.S.A. – with extremely high concentration in Oakland, Wayne, Macomb, Genesee, and St. Clair Counties. Technicians can start as high as $10-$13 per hour, with opportunities to earn between $50,000-70,000/year after four years experience in this field.

For additional information please contact:
Prof. H.A. Hildebrandt (248) 232-4204 Fax (586) 779-3003

GRADING STANDARDS & PRACTICES:

All of the ATA courses are graded in the same manner.

70% of the grade is based on completion of 40 of the 54 listed P.O.'s (Perfromance Objectives), which are the competencies needed for each licensed area. The ten bolded P.O.'s must be included in the 40 P.O.'s you choose i.e. bolded P.O.'s are mandatory). P.O.'s must be turned in no later than the next class session to receive credit. All lab work must be completed in the OCC Auto Lab to receive credit for P.O.'s

30% of the grade is based on two examinations:

One Mid-Term Exam which is directed more toward theory;

One Final Exam on the last day of class which leans more toward troubleshooting problems and repair procedure. The Exam questions are similar in structure to the questions on the State of Michigan and A.S.E. tests.

The following scale will apply to the Performance Objectives Percentage and Examination Percentage.

94 – 100% = A
87 – 93% = B
80 – 86% = C
75 – 79% = D
0 – 74% = F

TEXTBOOK AND SUPPLIES:

Automotive Air Conditioning, 7th Edition – Boyce H. Dwiggins

ANY PARTS YOU NEED FOR REPAIRS, AND FOR ANY SUSPENSION SERVICE REPAIR PARTS ON YOUR VEHICLE

REQUIRED TOOLS:

All tools and special equipment are provided for lab activities. Students will be required to provide their own tools to become employed. They will be given a list of recommended basic tools and tool box. Snap-On Tool Company offers a special 50% one-time discount for students enrolled in college automotive programs. The Industrial Education representative will make a presentation to the class.

AUBURN HILLS CAMPUS COUNSELING:

B-BUILDING, ROOM B - 238

Auburn Hills Counseling

2900 Featherstone Road, Auburn Hills, MI 48326-2845, Building B, 2nd floor, Room 238

Counseling Office	(248) 232-4350	Hours:	
Fax	(248) 232-4355	Monday-Thursday	8:30 am - 8:00 pm
COMPASS Appointments	(248) 232-4436	Friday	8:30 am - 5:00 pm

Full-Time Counselors		Adjunct Counselors	Support Staff
Name	Office	Sarah Abraham	Susan Mamros
Charlie Kurzer, Department Chair	B-239	C. Renee Henson	Anna Bouchard
Verna Love	B-226	Rhonda Gaines	
Pat Shipp May	B-229	Rose Gooley	
Gail Mays	B-228	Jan Janks	
Pat Nowaczynski	B-235	Cindy Kozak	
Carlos Olivarez	B-237		
Alicia Paramo-Dionne	B-233		
Douglas Riddering	B-231		

If you have questions that resemble issues discussed in a counseling appointment, you should call (248) 232-4350 to schedule an appointment with an Auburn Hills counselor. If you have questions that are brief and allow for a short response, you may click on the link to e-mail your question to an Auburn Hills counselor.

AUBURN HILLS CAMPUS ACADEMIC SUPPORT CENTER:

B-Building, Room B - 110

ASC Hours - Academic Year 2007-2008				
Session	***Fall***	***Winter***	***Summer I***	***Summer II***
Dates	August 30 - Dec.17	Jan.7 - April 28	May 5 - June 25	June 30 - August 19
Days	***Hours***	***Hours***	***Hours***	***Hours***
Mon-Thu	8:30am-7:00pm	8:30am-7:00pm	8:30am-7:00pm	8:30am-7:00pm
Friday	8:30am-4:30pm	8:30am-4:30pm	8:30am-4:30pm	8:30am-4:30pm
Saturday	10:00am-2:00pm	10:00am-2:00pm	10am-2:pm	Closed

WITHDRAWALS:

If, during the course of the semester, a student decides to withdraw from the course, for whatever reason, the student must fill out the appropriate form in the counseling office, in order to receive the mark "W." Students who simply stop attending will receive a final grade of "F." ." Last Day to drop this class is the Friday of 12th week of instruction.

ADA NOTIFICATION:

Students requiring special assistance (including those affected by the American with Disabilities Act) should contact the PASS office, which will inform the instructor of any special conditions to the student's learning.

SUBJECT-TO-CHANGE NOTIFICATION:

Occasionally, necessary deviations from the syllabus may occur, and will always be announced by the instructor in class.

AUBURN HILLS CAMPUS
SCHEDULE OF SERVICE HOURS

AUBURN HILLS CAMPUS
SCHEDULE OF SERVICE HOURS

SUMMER II 2008
(Hours Subject to change)

Department	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Admissions **Business Office** **Financial Aid** **Records** **Registration**	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-5:00pm	Closed
Bookstore (Refer to Schedule for extended hours)	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-6:00pm	8:30am-5:00pm	Closed
Cafeteria	Closed	Closed	Closed	Closed	Closed	Closed
Children's Center	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:15pm	7:45am-5:00pm	Closed
Counseling	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-5:00pm	Closed
Department/Faculty Secretaries	8:30am-5:00pm[1]	8:30am-5:00pm[1]	8:30am-5:00pm[1]	8:30am-5:00pm[1]	8:30am-5:00pm[1]	Closed
Health and PE Building	9:00am-9:30pm	9:00am-9:30pm	9:00am-9:30pm	9:00am-9:30pm	9:00am-9:30pm	9:00am-3:00pm
Academic Support Center COMPASS testing-Refer to ASC Flyer	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-8:00pm	8:30am-4:30pm	10:00am-2:00pm
International Student Advisor Walk-in Hours	9:30am-11:30am 1:30pm-4:30pm[2]	9:30am-11:30am 1:30pm-4:30pm[2]	9:30am-11:30am 1:30pm-4:30pm[2]	9:30am-11:30am 1:30pm-4:30pm[2]	By special arrangement[2]	Closed
Java Cart	8:00am-8:00pm	8:00am-8:00pm	8:00am-8:00pm	8:00am-8:00pm	Closed	Closed
Library	8:00am-10:00pm	8:00am-10:00pm	8:00am-10:00pm	8:00am-10:00pm	8:00am-4:30pm	9:00am-3:00pm
PASS	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	8:00am-5:00pm	Closed
Veterans Affairs Office	9:30am-5:30pm	9:30am-6:00pm	9:30am-5:30pm	9:30am-6:00pm	Closed	Closed

[1] - Varies by department
[2] - Office hours are 8:30am-5:00pm. No support staff, so shortened walk-in hours are required to complete immigration work.

ATA 1800
HEATING, VENTILATION AND AIR CONDITIONING
MOTOR VEHICLE THEORY, DIAGNOSIS AND REPAIR
COURSE DESCRIPTION AND PERFORMANCE OBJECTIVES
Developed by Prof. H. A. Hildebrandt
Automotive Technology Servicing or Engineering Technician

ATA 1800 PERFORMANCE OBJECTIVES

1. Perform diagnostic tests and inspect heating system for malfunctions.
2. Test thermo-pneumatic controls.
3. Test electro-pneumatic controls.
4. Test mechanical-pneumatic controls.
5. Inspect and replace control cables and switches.
6. Replace heater control units.
7. Replace heater control valve.
8. Remove and replace heater core.
9. Inspect, remove and replace defrost ducts.
10. Replace defroster hose (air).
11. Service heater control components.
12. Repair or replace heater and air conditioner fan motor.
13. Diagnose and repair electrical heater/air conditioner circuits.
14. Diagnose and repair heater/air conditioner vacuum circuits and read vacuum schematics.
15. Service air conditioner control cables.
16. Remove and replace or repair pneumatic components.
17. Diagnose overheating problem.
18. Diagnose engine coolant loss.
19. Test and replace radiator.
20. Test and replace engine thermostat.

ATA 1800
AUTOMOTIVE AND RECREATIONAL VEHICLE HVAC
COURSE DESCRIPTION AND PERFORMANCE OBJECTIVES
Developed by Prof. H. A. Hildebrandt
Automotive Technology Servicing or Engineering Technician

ATA 1800 PERFORMANCE OBJECTIVES

1. Perform diagnostic tests and inspect heating system for malfunctions.
2. Test thermo-pneumatic controls.
3. Test electro-pneumatic controls.
4. Test mechanical-pneumatic controls.
5. Inspect and replace control cables and switches.
6. Replace heater control units.
7. Replace heater control valve.
8. Remove and replace heater core.
9. Inspect, remove and replace defrost ducts.
10. Replace defroster hose (air).
11. Service heater control components.
12. Repair or replace heater and air conditioner fan motor.
13. Diagnose and repair electrical heater/air conditioner circuits.
14. Diagnose and repair heater/air conditioner vacuum circuits and read vacuum schematics.
15. Service air conditioner control cables.
16. Remove and replace or repair pneumatic components.
17. Diagnose overheating problem.
18. Diagnose engine coolant loss.
19. Test and replace radiator.
20. Test and replace engine thermostat.

46. Replace evaporator control valve or diaphragm in air conditioning unit.

47. Remove and replace EPR valve.

48. Remove and replace POA valve.

49. Replace expansion valve in air conditioning units.

50. Replace expansion tube in air conditioning units.

51. Replace accumulator.

52. Flush system to remove foreign particles from failed compressor assembly.

ATA 1800
Automotive and Recreational Vehicle HVAC
Course Schedule

Session	Date	Material to be Covered	Reading / Homework
1		Overview Performance Objectives Safety and Safety Test	Units 1-5
2		Principles, Terms, and Advantages of AC Systems Fundamentals of Heating and Air Conditioning Systems	Units 6-9
3		Types of Refrigerant R-12, R-22, SUVA 52, and 134A Component Identification LAB	Unit 8
4		Pressure and Temperature Testing Service Ports and Manifold Gauges LAB	T-P R 1-8 SP 1 & 6
5		Recovery Systems LAB	Hand-Outs SD 16
6		Heating, Defrosting, and Fresh Air Ventilation Systems LAB	Units 20 & 21
7		Compressor, Clutch, and Shaft Seal Condenser and High Pressure Orifice Tube and Evaporators Expansion Valves LAB	SD 7, 8, &10
8		LAB	Units 18 & 19
9		LAB	MID-SEMESTER EXAM
10		Temperature Control Systems - Manual and Automatic LAB	SP 3-15
11		Hoses, Fittings, and Seals LAB	SD 1-16
12		Diagnosis of Entire System LAB	SP 10 SD 16
13		LAB	
14		Review LAB	
15		FINAL EXAM	

Oakland Community College
Program Dashboard

The purpose of the program dashboard is to provide a data driven tool designed for the objective review of all curriculum offerings. Based on a common set of measures which apply to all programs/disciplines the dashboard facilitates the systematic identification of well performing as well as ailing curriculum so early intervention efforts can be undertaken.

In a rapidly changing economic and competitive environment it is necessary if not imperative to continually review curriculum offerings annually. Dashboard reports are a useful tool for monitoring program performance. In addition, they allow for an integrated approach for collecting, presenting, and monitoring data to meet long and short-term programmatic decision-making needs.

The Program Dashboard is based on seven measures which include:

- Sections Filled to Capacity
- Percent of Completed Sections
- Credit Hour Trend Ratio
- Percent of Minority Students
- Percent of Withdrawals
- Percent of Incompletes
- Student Course Completion Rate

The following report provides summative information for the most recent academic year as well as detailed trend data on each measure over the past several years.

Program Dashboard
Detail Report

Prefix ATA
Title Automobile Servicing

	Program				College Wide
	2006-07	**2005-06**	**2004-05**	**2003-04**	**2006-07**
Sections Filled to Capacity	91.3%	86.7%	85.8%	84.1%	84.4%
Percent of Completed Sections	79.4%	88.6%	92.7%	94.1%	90.7%
Headcount Trend Ratio	0.95	1.05	1.15	1.38	1.01
Credit Hour Trend Ratio	0.95	1.05	1.15	1.38	1.01
Percent of Minority Students	25.1%	25.4%	21.9%	26.3%	28.2%
Percent of Withdrawals	8.0%	6.8%	6.7%	6.1%	18.3%
Percent of Incompletes	2.5%	3.7%	1.2%	1.4%	1.5%
Student Course Completion Rate	78.2%	73.1%	79.1%	71.5%	67.7%
Dashboard Score	9.69	9.7	9.94	10.08	

Sections Filled to Capacity

Prefix ATA

Prefix Title Automobile Servicing

	2006-07	2005-06	2004-05	2003-04
Total Students	616	679	695	717
Total Capacity	675	783	810	853
Sections Filled To Capacity	91.3%	86.7%	85.8%	84.1%

Definition:

The percent of all available seats which are filled on the terms official census date. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: One-tenth-day of each term.

Methodology:

Total number of sections (credit courses only) that are filled to their designated capacity e.g. allocated seats divided by the total number of available seats in all sections throughout the academic year (July 1 through June 30). In other words, how many sections are filled to their capacity on the sections 1/10 day out of all sections? Include sections that are more than filled / overflowing in calculation.

One-Tenth Day data shows the capacity filled numbers at approximately 3 weeks after the Fall and Winter terms begin; and 1 week after the Summer I and II terms begin. This data will not provide additional enrollment data if the sections begin after the one-tenth day.

While a section may only have a few students enrolled in it the college is able to designate some sections as 'full' so that they are not cancelled (per OCCFA Master Agreement). Therefore some disciplines may show low fill capacity rates, and the college never cancelled the sections or condense the students into fewer sections offering the same course.

Percent of Completed Sections

Prefix ATA

Prefix Title Automobile Servicing

	2006-07	2005-06	2004-05	2003-04
Active Sections	27	31	38	32
Cancelled Sections	7	4	3	2
Total Sections	34	35	41	34
Percent of Completed Sections	79.4%	88.6%	92.7%	94.1%

Definition:

Of all offered sections, the percent of sections that are completed (not cancelled). Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: End of session, after grades are posted.

Methodology:

Annually, the total number of offered credit sections that are completed. Formula = number of completed credit sections divided by the total number of offered credit sections. In other words, the percent of these sections that are not cancelled.

Headcount Trend Ratio

Prefix ATA
Prefix Title Automobile Servicing

	2006-07	2005-06	2004-05	2003-04
Headcount Year 1	717	586	460	229
Headcount Year 2	724	717	586	460
Headcount Year 3	679	724	717	586
Headcount Year 4	619	679	724	717
Headcount Period 1	707	676	588	425
Headcount Period 2	674	707	676	588
Headcount Ratio	0.95	1.05	1.15	1.38

Definition:

Trend in student headcount based on a three year rolling average. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: One-tenth-day of each term. (Note: this measure is not used in the calculation of the Program Dashboard score since it parallels trends depicted in Credit Hours.)

Methodology:

In order to establish a meaningful enrollment statistic which applies to large as well as small disciplines/programs a "ratio" was calculated based on a three year rolling average of student headcount.

The formula used to calculate this measure involves three simple steps:

a. Year 1 + Year 2 + Year 3 / 3 = Period 1
b. Year 2 + Year 3 + Year 4 / 3 = Period 2
c. Period 2 / Period 1 = Ratio

If the ratio is greater than "1" this means there has been an enrollment increase. On the other hand, if the ratio is less than "1" this translates into an enrollment decline. The larger the number the larger the enrollment increase. Likewise, the lower the number the greater the enrollment decline.

Credit Hour Trend Ratio

Prefix ATA
Prefix Title Automobile Servicing

	2006-07	2005-06	2004-05	2003-04
Credit Hour Year 1	2,868	2,344	1,840	916
Credit Hour Year 2	2,896	2,868	2,344	1,840
Credit Hour Year 3	2,716	2,896	2,868	2,344
Credit Hour Year 4	2,476	2,716	2,896	2,868
Credit Hour Period 1	2,827	2,703	2,351	1,700
Credit Hour Period 2	2,696	2,827	2,703	2,351
Credit Hour Ratio	0.95	1.05	1.15	1.38

Definition:

Trend in student credit hours based on a three year rolling average. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: One-tenth-day of each term.

Methodology:

In order to establish a meaningful enrollment statistic which applies to large as well as small disciplines/programs a "ratio" was calculated based on a three year rolling average of student credit hours.

The formula used to calculate this measure involves three simple steps:

a. Year 1 + Year 2 + Year 3 / 3 = Period 1
b. Year 2 + Year 3 + Year 4 / 3 = Period 2
c. Period 2 / Period 1 = Ratio

If the ratio is greater than "1" this means there has been an enrollment increase. On the other hand, if the ratio is less than "1" this translates into an enrollment decline. The larger the number the larger the enrollment increase. Likewise, the lower the number the greater the enrollment decline.

Percent of Minority Students

Prefix ATA

Prefix Title Automobile Servicing

	2006-07	2005-06	2004-05	2003-04
Minority Students	82	92	89	109
Total Students	327	362	406	415
Percent of Minority Students	25.1%	25.4%	21.9%	26.3%

Definition:

The percent of students who are minority. Minority status is self-reported by the student and includes: African American, Asian, Hispanic, Native American Indian and Other. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: end of session for each term.

Methodology:

Percentages are based on known data and exclude missing information.

Percent of Withdrawals

Prefix ATA

Prefix Title Automobile Servicing

	2006-07	2005-06	2004-05	2003-04
Total Withdrawals	45	44	43	40
Total Grades	563	646	646	652
Percent of Withdrawals	8.0%	6.8%	6.7%	6.1%

Definition:

The percent of students who withdraw from their course after the term begins. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: End of session files, after grades are posted.

Methodology:

Percent of withdrawals is derived by dividing the total number of student initiated withdrawals by the total number of grades and marks awarded throughout the academic year. The Withdrawal-Passing (WP), and Withdrawal-Failing (WF) are considered Withdrawals (W). Meanwhile, calculations exclude: Audit (AU), Not Attended (N), and Not Reported (NR).

Percent of Incompletes

Prefix ATA

Prefix Title Automobile Servicing

	2005-06	2005-06	2004-05	2003-04
Total Incompletes	14	24	8	9
Total Grades	563	646	646	652
Percent of Incompletes	2.5%	3.7%	1.2%	1.4%

Definition:

The percent of students who receive an incomplete in their course. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: End of session files, after grades are posted.

Methodology:

Percent of incompletes is derived by dividing the total number of incompletes by the total number of grades and marks awarded throughout the academic year. The Continuous Progress (CP) grade is considered an Incomplete (I). Meanwhile, calculations exclude: Audit (AU), Not Attended (N), and Not Reported (NR).

Student Course Completion Rate

Prefix ATA

Prefix Title Automobile Servicing

	2006-07	2005-06	2004-05	2003-04
Successful Grades	440	472	511	466
Total Student Grades	563	646	646	652
Student Course Completion Rate	78.2%	73.1%	79.1%	71.5%

Definition:

The percent of students who successfully complete a course with a grade of "C" or higher. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: End of session files, after grades are posted.

Methodology:

Student success rates are based on end of session data after all grades have been posted. Data includes grades from the entire academic year (Summer II, Fall, Winter, and Summer I). The following grades/marks are excluded from the calculation: Audit (AU), Not Attended (N) and Not Reported (NR).

Oakland Community College
Program Dashboard

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The Program Dashboard is based on seven measures which include:

- Sections Filled to Capacity
- Percent of Completed Sections
- Credit Hour Trend Ratio
- Percent of Minority Students
- Percent of Withdrawals
- Percent of Incompletes
- Student Course Completion Rate

The following report provides summative information for the most recent academic year as well as detailed trend data on each measure over the past several years.

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Detail Report

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Title Automobile Servicing

	Program				College Wide
	2006-07	**2005-06**	**2004-05**	**2003-04**	**2006-07**
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Percent of Completed Sections	79.4%	88.6%	92.7%	94.1%	90.7%
Headcount Trend Ratio	0.95	1.05	1.15	1.38	1.01
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Prefix Title Automobile Servicing

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Methodology:

Total number of sections (credit courses only) that are filled to their designated capacity e.g. allocated seats divided by the total number of available seats in all sections throughout the academic year (July 1 through June 30). In other words, how many sections are filled to their capacity on the sections 1/10 day out of all sections? Include sections that are more than filled / overflowing in calculation.

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While a section may only have a few students enrolled in it the college is able to designate some sections as 'full' so that they are not cancelled (per OCCFA Master Agreement). Therefore some disciplines may show low fill capacity rates, and the college never cancelled the sections or condense the students into fewer sections offering the same course.

Percent of Completed Sections

Prefix ATA

Prefix Title Automobile Servicing

	2006-07	2005-06	2004-05	2003-04
Active Sections	27	31	38	32
Cancelled Sections	7	4	3	2
Total Sections	34	35	41	34
Percent of Completed Sections	79.4%	88.6%	92.7%	94.1%

Definition:

Of all offered sections, the percent of sections that are completed (not cancelled). Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: End of session, after grades are posted.

Methodology:

Annually, the total number of offered credit sections that are completed. Formula = number of completed credit sections divided by the total number of offered credit sections. In other words, the percent of these sections that are not cancelled.

Headcount Trend Ratio

Prefix ATA
Prefix Title Automobile Servicing

	2006-07	2005-06	2004-05	2003-04
Headcount Year 1	717	586	460	229
Headcount Year 2	724	717	586	460
Headcount Year 3	679	724	717	586
Headcount Year 4	619	679	724	717
Headcount Period 1	707	676	588	425
Headcount Period 2	674	707	676	588
Headcount Ratio	0.95	1.05	1.15	1.38

Definition:

Trend in student headcount based on a three year rolling average. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: One-tenth-day of each term. (Note: this measure is not used in the calculation of the Program Dashboard score since it parallels trends depicted in Credit Hours.)

Methodology:

In order to establish a meaningful enrollment statistic which applies to large as well as small disciplines/programs a "ratio" was calculated based on a three year rolling average of student headcount.

The formula used to calculate this measure involves three simple steps:

a. Year 1 + Year 2 + Year 3 / 3 = Period 1
b. Year 2 + Year 3 + Year 4 / 3 = Period 2
c. Period 2 / Period 1 = Ratio

If the ratio is greater than "1" this means there has been an enrollment increase. On the other hand, if the ratio is less than "1" this translates into an enrollment decline. The larger the number the larger the enrollment increase. Likewise, the lower the number the greater the enrollment decline.

Credit Hour Trend Ratio

Prefix ATA
Prefix Title Automobile Servicing

	2006-07	2005-06	2004-05	2003-04
Credit Hour Year 1	2,868	2,344	1,840	916
Credit Hour Year 2	2,896	2,868	2,344	1,840
Credit Hour Year 3	2,716	2,896	2,868	2,344
Credit Hour Year 4	2,476	2,716	2,896	2,868
Credit Hour Period 1	2,827	2,703	2,351	1,700
Credit Hour Period 2	2,696	2,827	2,703	2,351
Credit Hour Ratio	0.95	1.05	1.15	1.38

Definition:

Trend in student credit hours based on a three year rolling average. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: One-tenth-day of each term.

Methodology:

In order to establish a meaningful enrollment statistic which applies to large as well as small disciplines/programs a "ratio" was calculated based on a three year rolling average of student credit hours.

The formula used to calculate this measure involves three simple steps:

a. Year 1 + Year 2 + Year 3 / 3 = Period 1
b. Year 2 + Year 3 + Year 4 / 3 = Period 2
c. Period 2 / Period 1 = Ratio

If the ratio is greater than "1" this means there has been an enrollment increase. On the other hand, if the ratio is less than "1" this translates into an enrollment decline. The larger the number the larger the enrollment increase. Likewise, the lower the number the greater the enrollment decline.

Percent of Minority Students

Prefix ATA

Prefix Title Automobile Servicing

	2006-07	2005-06	2004-05	2003-04
Minority Students	82	92	89	109
Total Students	327	362	406	415
Percent of Minority Students	25.1%	25.4%	21.9%	26.3%

Definition:

The percent of students who are minority. Minority status is self-reported by the student and includes: African American, Asian, Hispanic, Native American Indian and Other. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: end of session for each term.

Methodology:

Percentages are based on known data and exclude missing information.

Percent of Withdrawals

Prefix ATA

Prefix Title Automobile Servicing

	2006-07	2005-06	2004-05	2003-04
Total Withdrawals	45	44	43	40
Total Grades	563	646	646	652
Percent of Withdrawals	8.0%	6.8%	6.7%	6.1%

Definition:

The percent of students who withdraw from their course after the term begins. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: End of session files, after grades are posted.

Methodology:

Percent of withdrawals is derived by dividing the total number of student initiated withdrawals by the total number of grades and marks awarded throughout the academic year. The Withdrawal-Passing (WP), and Withdrawal-Failing (WF) are considered Withdrawals (W). Meanwhile, calculations exclude: Audit (AU), Not Attended (N), and Not Reported (NR).

Percent of Incompletes

Prefix ATA

Prefix Title Automobile Servicing

	2005-06	2005-06	2004-05	2003-04
Total Incompletes	14	24	8	9
Total Grades	563	646	646	652
Percent of Incompletes	2.5%	3.7%	1.2%	1.4%

Definition:

The percent of students who receive an incomplete in their course. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: End of session files, after grades are posted.

Methodology:

Percent of incompletes is derived by dividing the total number of incompletes by the total number of grades and marks awarded throughout the academic year. The Continuous Progress (CP) grade is considered an Incomplete (I). Meanwhile, calculations exclude: Audit (AU), Not Attended (N), and Not Reported (NR).

Student Course Completion Rate

Prefix ATA

Prefix Title Automobile Servicing

	2006-07	2005-06	2004-05	2003-04
Successful Grades	440	472	511	466
Total Student Grades	563	646	646	652
Student Course Completion Rate	78.2%	73.1%	79.1%	71.5%

Definition:

The percent of students who successfully complete a course with a grade of "C" or higher. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: End of session files, after grades are posted.

Methodology:

Student success rates are based on end of session data after all grades have been posted. Data includes grades from the entire academic year (Summer II, Fall, Winter, and Summer I). The following grades/marks are excluded from the calculation: Audit (AU), Not Attended (N) and Not Reported (NR).

Occupational Projections
(2007–2012)

The following projections are for those occupations most closely associated with this program based on national and regional sources. However, the extent to which specific OCC programs lead to employment within a given Standard Occupational Code (SOC) is dependent upon the way in which the U.S. Department of Labor groups specific occupations.

Occupational projections are presented at the "Detailed Standard Occupational Code" level as defined by the U.S. Department of Labor.

Although based on sound well tested economic modeling procedures, projections are subject to change based on emerging economic, political and social forces.

These projections reflect the four county region of Oakland, Macomb, Livingston and Wayne counties.

Projections are based on data from 24 major data sources, including the U.S. Department of Commerce, Bureau of Labor Statistics (BLS), Internal Revenue Service (IRS), and Census data. To forecast occupational demand at the county level, BLS data are regionalized and adjusted for emerging technological changes, the age of workers by occupation, and other factors affecting occupational demand.

Occupational forecast data was obtained from CCbenefits Inc. Community College Strategic Planner (CCSP).

Occupational Skills Analysis
Automotive Master Mechanics (49-3023.01)

Repair automobiles, trucks, buses, and other vehicles. Master mechanics repair virtually any part on the vehicle or specialize in the transmission system.

Occupational Knowledge

Knowledge	Importance	Imp (0-100)	Level	Lvl (0-100)
Mechanical	Very Important	85	Expert	87
Computers and Electronics	Important	62	Advanced	58
Education and Training	Important	55	Intermediate	47
Customer and Personal Service	Important	61	Intermediate	46
Physics	Somewhat Important	43	Intermediate	45
Mathematics	Somewhat Important	49	Intermediate	44
Engineering and Technology	Somewhat Important	45	Intermediate	41
Public Safety and Security	Somewhat Important	46	Intermediate	37
Chemistry	Somewhat Important	36	Intermediate	34
English Language	Somewhat Important	36	Intermediate	33
Transportation	Somewhat Important	33	Intermediate	27
Sales and Marketing	Not Important	24	Intermediate	26
Administration and Management	Somewhat Important	26	Basic	24
Design	Not Important	18	Basic	23
Telecommunications	Somewhat Important	27	Basic	23
Psychology	Not Important	20	Basic	20
Communications and Media	Not Important	22	Basic	19
Building and Construction	Not Important	15	Basic	19
Law and Government	Not Important	13	Basic	17
Economics and Accounting	Not Important	15	Basic	14
Clerical	Not Important	11	Basic	13
Personnel and Human Resources	Not Important	12	Basic	13
Foreign Language	Not Important	7	Basic	10
Production and Processing	Not Important	12	Basic	10
Medicine and Dentistry	Not Important	7	Basic	8
Therapy and Counseling	Not Important	3	Basic	4
Geography	Not Important	3	Basic	3
History and Archeology	Not Important	3	Basic	3
Food Production	Not Important	2	Basic	2
Sociology and Anthropology	Not Important	0	Basic	0
Philosophy and Theology	Not Important	0	Basic	0
Fine Arts	Not Important	0	Basic	0
Biology	Not Important	0	Basic	0

Source: O*NET Database 11

Occupational Skills

Skill	Importance	Imp (0-100)	Level	Lvl (0-100)
Troubleshooting	Very Important	98	Expert	75
Active Learning	Very Important	93	Advanced	74
Reading Comprehension	Very Important	91	Advanced	71
Complex Problem Solving	Very Important	87	Advanced	67
Repairing	Very Important	95	Advanced	67
Equipment Maintenance	Very Important	76	Advanced	67
Critical Thinking	Very Important	90	Advanced	66
Equipment Selection	Very Important	94	Advanced	65
Installation	Very Important	87	Advanced	62
Instructing	Important	70	Advanced	62
Coordination	Important	70	Advanced	61
Learning Strategies	Very Important	76	Advanced	55
Active Listening	Very Important	81	Advanced	55
Speaking	Very Important	76	Advanced	52
Operation Monitoring	Important	64	Advanced	51
Mathematics	Important	66	Advanced	51
Monitoring	Important	62	Advanced	51
Writing	Important	70	Intermediate	49
Technology Design	Important	57	Intermediate	48
Quality Control Analysis	Important	58	Intermediate	47
Time Management	Important	73	Intermediate	47
Judgment and Decision Making	Important	65	Intermediate	46
Operation and Control	Important	62	Intermediate	46
Systems Analysis	Somewhat Important	46	Intermediate	40
Science	Somewhat Important	49	Intermediate	38
Systems Evaluation	Somewhat Important	41	Intermediate	37
Social Perceptiveness	Somewhat Important	39	Intermediate	37
Persuasion	Somewhat Important	31	Intermediate	36
Service Orientation	Somewhat Important	35	Intermediate	36
Management of Material Resources	Somewhat Important	35	Intermediate	35
Operations Analysis	Somewhat Important	35	Intermediate	32
Negotiation	Somewhat Important	28	Intermediate	31
Management of Financial Resources	Somewhat Important	26	Intermediate	28
Programming	Somewhat Important	26	Intermediate	25
Management of Personnel Resources	Not Important	22	Basic	19

Source: O*NET Database 11

Occupational Abilities

Ability	Importance	Imp (0-100)	Level	Lvl (0-100)
Extent Flexibility	Important	56	Advanced	68
Information Ordering	Very Important	78	Advanced	61
Problem Sensitivity	Very Important	81	Advanced	61
Inductive Reasoning	Very Important	78	Advanced	59
Finger Dexterity	Important	69	Advanced	59
Visualization	Important	60	Advanced	59
Reaction Time	Important	53	Advanced	57
Oral Comprehension	Important	69	Advanced	57
Written Comprehension	Important	60	Advanced	57
Speed of Closure	Important	56	Advanced	55
Near Vision	Very Important	75	Advanced	55
Oral Expression	Important	66	Advanced	55
Flexibility of Closure	Important	72	Advanced	55
Hearing Sensitivity	Important	69	Advanced	55
Control Precision	Important	69	Advanced	55
Perceptual Speed	Important	66	Advanced	54
Visual Color Discrimination	Important	56	Advanced	54
Deductive Reasoning	Very Important	78	Advanced	54
Auditory Attention	Important	60	Advanced	52
Category Flexibility	Important	56	Advanced	52
Selective Attention	Important	63	Advanced	52
Arm-Hand Steadiness	Very Important	75	Advanced	50
Speech Recognition	Important	60	Advanced	50
Manual Dexterity	Important	72	Intermediate	48
Response Orientation	Important	50	Intermediate	48
Fluency of Ideas	Important	50	Intermediate	46
Static Strength	Important	56	Intermediate	46
Trunk Strength	Important	50	Intermediate	43
Sound Localization	Important	50	Intermediate	43
Originality	Important	50	Intermediate	43
Multilimb Coordination	Important	56	Intermediate	43
Speech Clarity	Important	66	Intermediate	43
Memorization	Important	53	Intermediate	43
Depth Perception	Important	60	Intermediate	41
Written Expression	Somewhat Important	44	Intermediate	39
Glare Sensitivity	Somewhat Important	38	Intermediate	38
Rate Control	Somewhat Important	41	Intermediate	38
Time Sharing	Somewhat Important	41	Intermediate	38
Far Vision	Important	56	Intermediate	36
Wrist-Finger Speed	Somewhat Important	35	Intermediate	36
Spatial Orientation	Somewhat Important	47	Intermediate	36
Night Vision	Somewhat Important	41	Intermediate	36
Stamina	Somewhat Important	35	Intermediate	30
Speed of Limb Movement	Somewhat Important	35	Intermediate	30
Mathematical Reasoning	Somewhat Important	41	Intermediate	30
Number Facility	Somewhat Important	38	Intermediate	30
Peripheral Vision	Somewhat Important	38	Intermediate	30
Dynamic Strength	Somewhat Important	35	Intermediate	30
Gross Body Coordination	Somewhat Important	41	Intermediate	29
Gross Body Equilibrium	Somewhat Important	35	Intermediate	27
Explosive Strength	Not Important	19	Basic	14
Dynamic Flexibility	Not Important	9	Basic	7

Source: O*NET Database 11

Occupational Skills Analysis
Automotive Specialty Technicians (49-3023.02)

Repair only one system or component on a vehicle, such as brakes, suspension, or radiator.

Occupational Knowledge

Knowledge	Importance	Imp (0-100)	Level	Lvl (0-100)
Mechanical	Very Important	89	Expert	84
Customer and Personal Service	Very Important	85	Expert	79
Engineering and Technology	Important	72	Advanced	60
Administration and Management	Important	68	Advanced	59
Computers and Electronics	Important	65	Advanced	56
Physics	Somewhat Important	45	Advanced	54
Education and Training	Important	57	Advanced	51
Mathematics	Important	53	Intermediate	47
Sales and Marketing	Important	68	Intermediate	45
Clerical	Somewhat Important	46	Intermediate	43
Design	Somewhat Important	38	Intermediate	42
Psychology	Somewhat Important	30	Intermediate	39
English Language	Somewhat Important	42	Intermediate	36
Production and Processing	Somewhat Important	45	Intermediate	35
Personnel and Human Resources	Somewhat Important	40	Intermediate	35
Chemistry	Somewhat Important	31	Intermediate	35
Law and Government	Not Important	21	Intermediate	29
Foreign Language	Somewhat Important	30	Intermediate	29
Transportation	Somewhat Important	40	Intermediate	29
Public Safety and Security	Somewhat Important	33	Intermediate	26
Communications and Media	Somewhat Important	36	Intermediate	25
Sociology and Anthropology	Not Important	19	Basic	24
Therapy and Counseling	Not Important	14	Basic	24
Economics and Accounting	Somewhat Important	29	Basic	23
Philosophy and Theology	Not Important	19	Basic	22
Geography	Not Important	15	Basic	20
Medicine and Dentistry	Not Important	15	Basic	16
Telecommunications	Not Important	14	Basic	13
History and Archeology	Not Important	5	Basic	12
Building and Construction	Not Important	3	Basic	3
Fine Arts	Not Important	0	Basic	0
Food Production	Not Important	0	Basic	0
Biology	Not Important	0	Basic	0

Source: O*NET Database 11

Occupational Abilities

Ability	Importance	Imp (0-100)	Level	Lvl (0-100)
Extent Flexibility	Very Important	75	Advanced	63
Control Precision	Important	72	Advanced	57
Multilimb Coordination	Important	63	Advanced	57
Visualization	Important	60	Advanced	55
Deductive Reasoning	Important	63	Advanced	55
Hearing Sensitivity	Important	69	Advanced	54
Auditory Attention	Important	63	Advanced	54
Finger Dexterity	Important	69	Advanced	54
Information Ordering	Important	53	Advanced	52
Manual Dexterity	Very Important	75	Advanced	52
Oral Expression	Important	60	Advanced	50
Selective Attention	Important	66	Advanced	50
Oral Comprehension	Important	66	Advanced	50
Inductive Reasoning	Important	63	Intermediate	48
Near Vision	Important	66	Intermediate	48
Arm-Hand Steadiness	Very Important	75	Intermediate	48
Problem Sensitivity	Important	72	Intermediate	48
Reaction Time	Somewhat Important	41	Intermediate	46
Visual Color Discrimination	Somewhat Important	41	Intermediate	45
Speed of Closure	Somewhat Important	47	Intermediate	43
Flexibility of Closure	Somewhat Important	44	Intermediate	43
Category Flexibility	Somewhat Important	47	Intermediate	43
Static Strength	Somewhat Important	38	Intermediate	43
Depth Perception	Somewhat Important	41	Intermediate	43
Written Comprehension	Important	50	Intermediate	43
Trunk Strength	Important	53	Intermediate	41
Response Orientation	Somewhat Important	41	Intermediate	41
Time Sharing	Somewhat Important	41	Intermediate	41
Written Expression	Somewhat Important	44	Intermediate	39
Speech Recognition	Important	56	Intermediate	39
Perceptual Speed	Somewhat Important	41	Intermediate	38
Fluency of Ideas	Somewhat Important	38	Intermediate	38
Far Vision	Somewhat Important	38	Intermediate	36
Glare Sensitivity	Somewhat Important	35	Intermediate	34
Gross Body Coordination	Somewhat Important	38	Intermediate	34
Rate Control	Somewhat Important	28	Intermediate	32
Originality	Somewhat Important	35	Intermediate	32
Speech Clarity	Important	53	Intermediate	32
Dynamic Strength	Somewhat Important	28	Intermediate	30
Memorization	Somewhat Important	31	Intermediate	29
Wrist-Finger Speed	Somewhat Important	25	Intermediate	27
Spatial Orientation	Somewhat Important	28	Intermediate	25
Sound Localization	Not Important	22	Intermediate	25
Number Facility	Not Important	19	Intermediate	25
Stamina	Not Important	22	Basic	23
Speed of Limb Movement	Not Important	19	Basic	23
Gross Body Equilibrium	Not Important	22	Basic	23
Mathematical Reasoning	Not Important	16	Basic	14
Night Vision	Not Important	13	Basic	14
Peripheral Vision	Not Important	13	Basic	11
Dynamic Flexibility	Not Important	6	Basic	7
Explosive Strength	Not Important	3	Basic	4

Source: O*NET Database 11

Occupational Skills Analysis
Bus and Truck Mechanics and Diesel Engine Specialists (49-3031.00)

Diagnose, adjust, repair, or overhaul trucks, buses, and all types of diesel engines. Includes mechanics working primarily with automobile diesel engines.

Occupational Knowledge

Knowledge	Importance	Imp (0-100)	Level	Lvl (0-100)
Mechanical	Very Important	81	Expert	77
Public Safety and Security	Important	58	Advanced	53
Transportation	Important	61	Intermediate	49
Engineering and Technology	Somewhat Important	45	Intermediate	39
Law and Government	Somewhat Important	45	Intermediate	37
Mathematics	Somewhat Important	34	Intermediate	36
Chemistry	Somewhat Important	32	Intermediate	35
English Language	Somewhat Important	45	Intermediate	35
Education and Training	Somewhat Important	36	Intermediate	34
Physics	Somewhat Important	34	Intermediate	34
Customer and Personal Service	Somewhat Important	41	Intermediate	31
Computers and Electronics	Somewhat Important	31	Intermediate	31
Production and Processing	Somewhat Important	33	Intermediate	30
Clerical	Somewhat Important	25	Intermediate	29
Design	Not Important	23	Intermediate	27
Communications and Media	Not Important	15	Basic	20
Building and Construction	Not Important	12	Basic	19
Telecommunications	Not Important	15	Basic	16
Administration and Management	Not Important	18	Basic	16
Psychology	Not Important	17	Basic	16
Medicine and Dentistry	Not Important	15	Basic	15
Geography	Not Important	15	Basic	13
Personnel and Human Resources	Not Important	12	Basic	11
Economics and Accounting	Not Important	9	Basic	7
Sociology and Anthropology	Not Important	4	Basic	7
Therapy and Counseling	Not Important	4	Basic	6
Sales and Marketing	Not Important	4	Basic	5
Philosophy and Theology	Not Important	5	Basic	5
Foreign Language	Not Important	5	Basic	5
History and Archeology	Not Important	4	Basic	4
Food Production	Not Important	3	Basic	3
Biology	Not Important	2	Basic	2
Fine Arts	Not Important	0	Basic	0

Source: O*NET Database 11

Occupational Skills

Skill	Importance	Imp (0-100)	Level	Lvl (0-100)
Equipment Maintenance	Very Important	87	Advanced	72
Troubleshooting	Very Important	84	Advanced	71
Repairing	Very Important	82	Advanced	68
Coordination	Important	62	Advanced	54
Installation	Important	63	Advanced	54
Learning Strategies	Important	53	Advanced	53
Equipment Selection	Important	62	Advanced	51
Instructing	Important	50	Intermediate	49
Reading Comprehension	Important	66	Intermediate	48
Social Perceptiveness	Important	52	Intermediate	47
Time Management	Important	53	Intermediate	47
Active Learning	Important	51	Intermediate	46
Critical Thinking	Somewhat Important	49	Intermediate	45
Active Listening	Important	55	Intermediate	43
Complex Problem Solving	Somewhat Important	48	Intermediate	42
Writing	Important	50	Intermediate	42
Judgment and Decision Making	Important	55	Intermediate	42
Monitoring	Somewhat Important	45	Intermediate	41
Speaking	Important	50	Intermediate	41
Science	Somewhat Important	40	Intermediate	41
Technology Design	Somewhat Important	37	Intermediate	37
Negotiation	Somewhat Important	35	Intermediate	36
Persuasion	Somewhat Important	32	Intermediate	36
Service Orientation	Somewhat Important	35	Intermediate	36
Mathematics	Somewhat Important	45	Intermediate	36
Systems Analysis	Somewhat Important	37	Intermediate	33
Operation and Control	Somewhat Important	33	Intermediate	33
Quality Control Analysis	Somewhat Important	32	Intermediate	32
Systems Evaluation	Somewhat Important	35	Intermediate	32
Operation Monitoring	Somewhat Important	32	Intermediate	31
Management of Personnel Resources	Somewhat Important	29	Intermediate	29
Management of Material Resources	Somewhat Important	30	Intermediate	28
Management of Financial Resources	Somewhat Important	27	Intermediate	27
Operations Analysis	Somewhat Important	27	Intermediate	26
Programming	Not Important	9	Basic	11

Source: O*NET Database 11

Occupational Abilities

Ability	Importance	Imp (0-100)	Level	Lvl (0-100)
Problem Sensitivity	Very Important	78	Advanced	63
Information Ordering	Important	63	Advanced	59
Visualization	Important	63	Advanced	59
Inductive Reasoning	Important	63	Advanced	57
Hearing Sensitivity	Important	63	Advanced	55
Oral Expression	Important	66	Advanced	54
Extent Flexibility	Important	63	Advanced	54
Oral Comprehension	Important	66	Advanced	54
Control Precision	Important	66	Advanced	52
Near Vision	Important	69	Advanced	50
Flexibility of Closure	Important	50	Advanced	50
Finger Dexterity	Important	63	Advanced	50
Static Strength	Important	50	Advanced	50
Deductive Reasoning	Important	63	Advanced	50
Multilimb Coordination	Important	69	Intermediate	48
Selective Attention	Important	63	Intermediate	48
Manual Dexterity	Very Important	75	Intermediate	46
Auditory Attention	Important	60	Intermediate	46
Visual Color Discrimination	Somewhat Important	41	Intermediate	46
Time Sharing	Somewhat Important	35	Intermediate	43
Speed of Closure	Somewhat Important	41	Intermediate	41
Arm-Hand Steadiness	Important	66	Intermediate	41
Trunk Strength	Important	63	Intermediate	41
Depth Perception	Important	50	Intermediate	41
Written Comprehension	Somewhat Important	41	Intermediate	41
Category Flexibility	Somewhat Important	35	Intermediate	36
Gross Body Coordination	Somewhat Important	41	Intermediate	36
Speech Clarity	Important	56	Intermediate	36
Speech Recognition	Important	50	Intermediate	34
Reaction Time	Somewhat Important	35	Intermediate	32
Written Expression	Somewhat Important	41	Intermediate	32
Perceptual Speed	Somewhat Important	31	Intermediate	32
Gross Body Equilibrium	Somewhat Important	47	Intermediate	32
Dynamic Strength	Somewhat Important	35	Intermediate	30
Glare Sensitivity	Somewhat Important	41	Intermediate	29
Sound Localization	Somewhat Important	31	Intermediate	29
Memorization	Somewhat Important	31	Intermediate	27
Response Orientation	Somewhat Important	28	Intermediate	27
Far Vision	Somewhat Important	31	Intermediate	25
Rate Control	Not Important	22	Basic	23
Stamina	Somewhat Important	35	Basic	23
Wrist-Finger Speed	Not Important	22	Basic	23
Fluency of Ideas	Not Important	19	Basic	21
Speed of Limb Movement	Somewhat Important	25	Basic	21
Peripheral Vision	Somewhat Important	25	Basic	20
Spatial Orientation	Somewhat Important	28	Basic	18
Originality	Not Important	16	Basic	13
Night Vision	Not Important	13	Basic	11
Mathematical Reasoning	Not Important	16	Basic	7
Explosive Strength	Not Important	9	Basic	7
Dynamic Flexibility	Not Important	3	Basic	2
Number Facility	Not Important	3	Basic	2

Source: O*NET Database 11

Advisory Committee
Automotive Servicing Technology
Diesel Engine Technology

Earl Dien	Delphi
Dave Droz	Delphi
Dale Smith	K & D Automotive
Gary Sha	Auburn Pontiac
Mark Murphy	Snap-On Tool
Joe Jacob	Jake's Repair
Les Haight	Audi
Ron Meyers	Automotive Service Association
Tom Nash	Motor Magazine
Dennis Went or Paul Skalny	Army Tank Automotive Command
Tom Lacomb	SMART
Frank Corsick	DaimlerChrysler
Warren Hildebrandt	Rochester Schools
Casmir Sabodus	OCC Student (ATA and DHE)

Ex-Officio Members:

Philip Hale	OCC Dean
Jim Inch	OCC Adjunct
Ed Houchen	OCC Adjunct
Joe Burdzinski	OCC Adjunct
Jeff Burdzinski	OCC Adjunct
Phil Crockett	OCC Adjunct
Alice DeGrandchamp	OCC Paraprofessional
Rick Driscoll	OCC Paraprofessional
Charley Kurser	OCC Counselor
Tony Hildebrandt	OCC Professor

March 31, 2006

College Curriculum
Review Committee

DATA COLLECTION

E. INPUT FROM INTERNAL & EXTERNAL COMMUNITY

OAKLAND COMMUNITY COLLEGE
ADVISORY COMMITTEE/INDUSTRY PERCEPTIONS OF OCCUPATIONAL PROGRAMS
(Program Review of Occupational Evaluation - PROE)

Thank you for taking the time to complete the following survey as it will help to improve upon the success of the occupational programs at Oakland Community College. Please circle the letter that corresponds to your selection. *Please circle only one letter.*

1. The program at Oakland Community College is meeting the expectations of the advisory committee.

   (a) Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

2. The courses offered are preparing the students for the workforce.

   (a) Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

3. The advisory committee is informed about the program.

   (a) Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

4. The advisory committee has substantial input into decision-making within the program.

   (a) Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

College Curriculum
Review Committee

DATA COLLECTION

E. INPUT FROM INTERNAL & EXTERNAL COMMUNITY

OAKLAND COMMUNITY COLLEGE
ADVISORY COMMITTEE/INDUSTRY PERCEPTIONS OF OCCUPATIONAL PROGRAMS
(Program Review of Occupational Evaluation - PROE)

5. The advisory committee is satisfied with the direction of the program.

   a. Strongly Agree (circled)
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

6. If there is one thing the committee would like to change about the program, explain what it is and how it would enhance the program.

____
____
____
____
____
____

Thank you for taking the time to complete this survey!

Name: Dale Smith

Industry Type/Agency: K&D Automotive Inc.

What OCC Program do you advise for: Automotive Servicing Tech

Date Completed: 6-2-08

Please Return To: Latyna A. Roberts
Oakland Community College, Office of State and Federal Programs, AH Campus

Due Date: ______________

DATA COLLECTION

E. INPUT FROM INTERNAL & EXTERNAL COMMUNITY

OAKLAND COMMUNITY COLLEGE
ADVISORY COMMITTEE/INDUSTRY PERCEPTIONS OF OCCUPATIONAL PROGRAMS
(Program Review of Occupational Evaluation - PROE)

Thank you for taking the time to complete the following survey as it will help to improve upon the success of the occupational programs at Oakland Community College. Please circle the letter that corresponds to your selection. *Please circle only one letter.*

1. The program at Oakland Community College is meeting the expectations of the advisory committee.

   a. Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

2. The courses offered are preparing the students for the workforce.

   a. Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

3. The advisory committee is informed about the program.

   a. Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

4. The advisory committee has substantial input into decision-making within the program.

   a. Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

DATA COLLECTION

E. INPUT FROM INTERNAL & EXTERNAL COMMUNITY (continued)

OAKLAND COMMUNITY COLLEGE
ADVISORY COMMITTEE/INDUSTRY PERCEPTIONS OF OCCUPATIONAL PROGRAMS
(Program Review of Occupational Evaluation - PROE)

5. The advisory committee is satisfied with the direction of the program.

   a. Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

6. If there is one thing the committee would like to change about the program, explain what it is and how it would enhance the program.

THE EQUIPMENT USED IN THE PROGRAM IS IN DIRE NEED OF UPDATING. THE STUDENTS NEED OF LEARNING WITH THE EQUIPMENT THAT WILL BE IN THE INDUSTRY.

Thank you for taking the time to complete this survey!

Name: TOM NASH SAE, AAM

Industry Type/Agency: AUTOMOTIVE AFTERMARKET SERVICE

What OCC Program do you advise for : AUTO SERVICING

Date Completed: JUNE 4, 2008

Please Return To: Letyna A. Roberts
Oakland Community College, Office of State and Federal Programs, AH Campus

Due Date: _____

DATA COLLECTION

E. INPUT FROM INTERNAL & EXTERNAL COMMUNITY

OAKLAND COMMUNITY COLLEGE
ADVISORY COMMITTEE/INDUSTRY PERCEPTIONS OF OCCUPATIONAL PROGRAMS
(Program Review of Occupational Evaluation - PROE)

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   a. Strongly Agree
   (b) Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

2. The courses offered are preparing the students for the workforce.

   a. Strongly Agree
   (b) Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

3. The advisory committee is informed about the program.

   a. Strongly Agree
   b. Agree
   (c) Neutral
   d. Disagree
   e. Strongly Disagree

4. The advisory committee has substantial input into decision-making within the program.

   a. Strongly Agree
   (b) Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

College Curriculum
Review Committee

DATA COLLECTION

E. INPUT FROM INTERNAL & EXTERNAL COMMUNITY (continued)

OAKLAND COMMUNITY COLLEGE
ADVISORY COMMITTEE/INDUSTRY PERCEPTIONS OF OCCUPATIONAL PROGRAMS
(Program Review of Occupational Evaluation - PROE)

5. The advisory committee is satisfied with the direction of the program.

   (a) Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

6. If there is one thing the committee would like to change about the program, explain what it is and how it would enhance the program.

_____
_____
_____
_____
_____
_____

Thank you for taking the time to complete this survey!

Name: Gary A. Shay

Industry Type/Agency: Dealership (Auburn Pontiac - GMC

What OCC Program do you advise for: Automotive

Date Completed: 6/3/08

Please Return To: Letyna A. Roberts
Oakland Community College, Office of State and Federal Programs, AH Campus

Due Date: _____

DATA COLLECTION

E. INPUT FROM INTERNAL & EXTERNAL COMMUNITY

OAKLAND COMMUNITY COLLEGE
ADVISORY COMMITTEE/INDUSTRY PERCEPTIONS OF OCCUPATIONAL PROGRAMS
(Program Review of Occupational Evaluation - PROE)

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   e. Strongly Disagree

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   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

3. The advisory committee is informed about the program.

   a. Strongly Agree
   b. Agree
   (c.) Neutral
   d. Disagree
   e. Strongly Disagree

4. The advisory committee has substantial input into decision-making within the program.

   a. Strongly Agree
   (b.) Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

College Curriculum
Review Committee

DATA COLLECTION

E. INPUT FROM INTERNAL & EXTERNAL COMMUNITY *(continued)*

OAKLAND COMMUNITY COLLEGE
ADVISORY COMMITTEE/INDUSTRY PERCEPTIONS OF OCCUPATIONAL PROGRAMS
(Program Review of Occupational Evaluation - PROE)

5. The advisory committee is satisfied with the direction of the program.

   a. Strongly Agree
   (b.) Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

6. If there is one thing the committee would like to change about the program, explain what it is and how it would enhance the program.

_____

_____

_____

_____

_____

_____

Thank you for taking the time to complete this survey!

Name: MARK B. MURPHY

Industry Type/Agency: OEM - MANUF. (SNAP-ON INDUSTRIAL)

What OCC Program do you advise for : AUTOMOTIVE

Date Completed: 6/4/08

Please Return To: Latyna A. Roberts
Oakland Community College, Office of State and Federal Programs, AH Campus

Due Date: _____

OAKLAND
COMMUNITY
COLLEGE

AUTOMOTIVE PROGRAM STUDENT EVALUATION SUMMER 2008

Prepared for:
Letyna Roberts
Manager of State and Federal Programs

Prepared by:
Stephanie Wren
Research Analyst
Office of Institutional Research
(248) 232-4528

June 2008

OAKLAND COMMUNITY COLLEGE
AUTOMOTIVE PROGRAM
STUDENT EVALUATION
SUMMER 2008

TABLE OF CONTENTS

OAKLAND COMMUNITY COLLEGE
AUTOMOTIVE PROGRAM
STUDENT EVALUATION
SUMMER 2008

Purpose

The purpose of the study was to compile the data for a summary report of the Automotive Program for the PROE/Curriculum Review process. The final results will be forwarded to Letyna Roberts, Manager of State and Federal Programs, for distribution.

Methodology

Survey responses were collected from 53 students. The survey gathered feedback from the students on issues such as the courses offered in the program, student satisfaction with the program, and the quality of instruction. The items were rated 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree), and 5 (strongly agree). Mean responses for each item were calculated and the results are presented below.

OAKLAND COMMUNITY COLLEGE
AUTOMOTIVE PROGRAM
STUDENT EVALUATION
SUMMER 2008

Results

	Question	Mean
1	My program of study at Oakland Community College is meeting my expectations.	4
2	The courses offered in my program of study are preparing me for the workforce.	4
3	I would like to change my current program of study because of academic reasons.	4
4	I would like to attend another institution because of dissatisfaction with my current program of :	4
5	I am satisfied with the quality of instructors in my program of study.	4
6	I feel that the instructors are knowledgeable about the course subject matter.	4
7	I am satisfied with the course offerings in my current program of study at Oakland Community	4
8	My instructors help me to understand how useful my program of study can be in the real-world	4
9	My instructors make the course subject matter seem interesting.	4
10	I am infomed about what is happening in my program.	4
11	I think the department is committed to student success.	4
12	I am satisfied with my program of study.	4

Note: The mean response for items three and four represents disagreement with the given statement.

- The majority of the students are indicating that they would not like to change their program of study because of academic reasons as noted by a mean response of 4 out of 5.
- Similarly, a majority of the students are indicating that they do not want to attend another institution because of dissatisfaction with their program of study as noted by a mean response of 4 out of 5.
- As noted above, the students have a great degree of satisfaction with the automotive program overall as noted by an average response of 4 out of 5 points on all of the questionnaire items.

Results Continued

Open-Ended Responses: *If there is one thing you would like to change about the program, then explain what it is and how it will enhance the program.*

1. Booby trap cars with problems we have to figure out.
2. Don't have to change; I like the class.
3. Everything is good.
4. Have real-world 'problems' brought into classes, and have group discussions regarding repair.
5. I really don't have anything to say, but thank Mr. Bill for supporting me throughout this program.
6. I would like to be provided with more projects.
7. I would like to be working in collaboration with an employer and the college. Also, I would need to be able to support myself financially as well.
8. I wouldn't change anything.
9. It would be helpful if there were more help from people educated in this field - such as people helping in the shop who have worked in automotive servicing - to help and educate us as we work.
10. Make all students do one same task at a time in class; do hands-on work with more instruction by teacher.
11. More instructors for more attention, and better help in finding employment in the field of study.
12. More program-supplied activities; a little more organization.

Results Continued

Open-Ended Responses: *If there is one thing you would like to change about the program, then explain what it is and how it will enhance the program.*

13. More staff to answer everybody's question.
14. More structured approach to lecture/lab time.
15. More structured class time; less off-subject talks; more tests; no book - it is useless.
16. N/A
17. Nothing
18. Nothing; it is great.
19. Some classes could use more hands-on instruction.
20. Some of the teachers could be more helpful with hands-on instruction.
21. Teach what we need to know and do when actually in the mechanic field.
22. The canceling of classes.
23. We need to be able to tear apart a working transmission and have a Dyno to test our work.
24. I wish we had more school vehicles to work on, because sometimes we can't get stuff done on our vehicles in the class period, and some of us don't have another vehicle to drive.
25. I would like to see more structured labs.

College Curriculum
Review Committee

DATA COLLECTION

E. INPUT FROM INTERNAL & EXTERNAL COMMUNITY

OAKLAND COMMUNITY COLLEGE
FACULTY PERCEPTIONS OF OCCUPATIONAL PROGRAMS
(Program Review of Occupational Evaluation - PROE)

Thank you for taking the time to complete the following survey as it will help to improve upon the success of the occupational programs at Oakland Community College. Please circle the letter that corresponds to your selection. *Please circle only one letter.*

1. The program of study in which I teach at Oakland Community College is meeting my expectations as a faculty member.

   a. Strongly Agree
   (b) Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

2. The courses offered in the program are preparing the students for the workforce.

   a. Strongly Agree
   (b) Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

3. The program can be more challenging academically for the students.

   (a) Agree
   b. Neutral
   c. Disagree
   d. Strongly Disagree

4. The program can be more competitive with other institutions that offer similar programs.

   a. Strongly Agree
   b. Agree
   (c) Neutral
   d. Disagree
   e. Strongly Disagree

DATA COLLECTION

E. INPUT FROM INTERNAL & EXTERNAL COMMUNITY

OAKLAND COMMUNITY COLLEGE
FACULTY PERCEPTIONS OF OCCUPATIONAL PROGRAMS
(Program Review of Occupational Evaluation - PROE)

9. I feel that the students are prepared for the rigors of the program.

a. Strongly Agree
b. Agree
c. Neutral
d. Disagree
e. Strongly Disagree

10. I am informed about what is happening in this program.

a. Strongly Agree
b. Agree
c. Neutral
d. Disagree
e. Strongly Disagree

11. Opportunities are available for me to make suggestions for improvements in this program.

a. Strongly Agree
b. Agree
c. Neutral
d. Disagree
e. Strongly Disagree

12. I think the department has a commitment to student success in the program.

a. Strongly Agree
b. Agree
c. Neutral
d. Disagree
e. Strongly Disagree

College Curriculum
Review Committee

DATA COLLECTION

E. INPUT FROM INTERNAL & EXTERNAL COMMUNITY

OAKLAND COMMUNITY COLLEGE
FACULTY PERCEPTIONS OF OCCUPATIONAL PROGRAMS
(Program Review of Occupational Evaluation - PROE)

5. I am satisfied with the quality of instruction provided to the students in this program.

   a. Strongly Agree
   (b.) Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

6. My fellow faculty members in the program are knowledgeable about the course subject-matter.

   (a.) Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

7. I am satisfied with the course offerings in this program.

   a. Strongly Agree
   (b.) Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

8. I feel that the program has a focus real-world application.

   a. Strongly Agree
   b. Agree
   (c.) Neutral
   d. Disagree
   e. Strongly Disagree

College Curriculum
Review Committee

DATA COLLECTION

E. INPUT FROM INTERNAL & EXTERNAL COMMUNITY

OAKLAND COMMUNITY COLLEGE
FACULTY PERCEPTIONS OF OCCUPATIONAL PROGRAMS
(Program Review of Occupational Evaluation - PROE)

13. I am satisfied with the direction of this program because ;

a. I think it prepares students for employment in the workforce.
b. Working in conjunction with the advisory committee keeps the program going in the right direction.
c. Feedback that I have received from the students indicates that the program is headed in the right direction.
d. I know that other programs at other institutions do not compare to OCC.

14. If there is one thing you would like to change about the program, explain what it is and how it would enhance the program.

_____
_____
_____
_____
_____
_____

Thank you for taking the time to complete this survey!

Name: BD Houchen

Industry Type/Agency: _____

What OCC Program do you advise for : Automotive

Date Completed: 5/13/08

Please Return To: Letyna A. Roberts
Oakland Community College, Office of State and Federal Programs, AH Campus

Due Date: _____

DATA COLLECTION

E. INPUT FROM INTERNAL & EXTERNAL COMMUNITY

OAKLAND COMMUNITY COLLEGE
FACULTY PERCEPTIONS OF OCCUPATIONAL PROGRAMS
(Program Review of Occupational Evaluation - PROE)

Thank you for taking the time to complete the following survey as it will help to improve upon the success of the occupational programs at Oakland Community College. Please circle the letter that corresponds to your selection. *Please circle only one letter.*

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   a. Strongly Agree
   b. Agree
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2. The courses offered in the program are preparing the students for the workforce.

   a. Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

3. The program can be more challenging academically for the students.

   a. Agree
   b. Neutral
   c. Disagree
   d. Strongly Disagree

4. The program can be more competitive with other institutions that offer similar programs.

   a. Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

DATA COLLECTION

E. INPUT FROM INTERNAL & EXTERNAL COMMUNITY (continued)

OAKLAND COMMUNITY COLLEGE
FACULTY PERCEPTIONS OF OCCUPATIONAL PROGRAMS
(Program Review of Occupational Evaluation - PROE)

5. I am satisfied with the quality of instruction provided to the students in this program.

   a. Strongly Agree
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   e. Strongly Disagree

6. My fellow faculty members in the program are knowledgeable about the course subject-matter.

   a. Strongly Agree
   b. Agree
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7. I am satisfied with the course offerings in this program.

   a. Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

8. I feel that the program has a focus real-world application.

   a. Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

DATA COLLECTION

E. INPUT FROM INTERNAL & EXTERNAL COMMUNITY (continued)

OAKLAND COMMUNITY COLLEGE
FACULTY PERCEPTIONS OF OCCUPATIONAL PROGRAMS
(Program Review of Occupational Evaluation - PROE)

9. I feel that the students are prepared for the rigors of the program.

   a. Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

10. I am informed about what is happening in this program.

   a. Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

11. Opportunities are available for me to make suggestions for improvements in this program.

   a. Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

12. I think the department has a commitment to student success in the program.

   a. Strongly Agree
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

DATA COLLECTION

E. INPUT FROM INTERNAL & EXTERNAL COMMUNITY (continued)

OAKLAND COMMUNITY COLLEGE
FACULTY PERCEPTIONS OF OCCUPATIONAL PROGRAMS
(Program Review of Occupational Evaluation - PROE)

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14. If there is one thing you would like to change about the program, explain what it is and how it would enhance the program.

_____
_____
_____
_____
_____
_____

Thank you for taking the time to complete this survey!

Name: Phillip Corbett

Industry Type/Agency: _____

What OCC Program do you advise for :_____

Date Completed: 5/16/08

Please Return To: Letyna A. Roberts
Oakland Community College, Office of State and Federal Programs, AH Campus

Due Date: _____

College Curriculum
Review Committee

DATA COLLECTION

E. INPUT FROM INTERNAL & EXTERNAL COMMUNITY

OAKLAND COMMUNITY COLLEGE
FACULTY PERCEPTIONS OF OCCUPATIONAL PROGRAMS
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3. The program can be more challenging academically for the students.

   a. Agree
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4. The program can be more competitive with other institutions that offer similar programs.

   a. Strongly Agree
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College Curriculum
Review Committee

DATA COLLECTION

E. INPUT FROM INTERNAL & EXTERNAL COMMUNITY

OAKLAND COMMUNITY COLLEGE
FACULTY PERCEPTIONS OF OCCUPATIONAL PROGRAMS
(Program Review of Occupational Evaluation - PROE)

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c. Neutral
d. Disagree
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8. I feel that the program has a focus real-world application.

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College Curriculum
Review Committee

DATA COLLECTION

E. INPUT FROM INTERNAL & EXTERNAL COMMUNITY

OAKLAND COMMUNITY COLLEGE
FACULTY PERCEPTIONS OF OCCUPATIONAL PROGRAMS
(Program Review of Occupational Evaluation - PROE)

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College Curriculum
Review Committee

DATA COLLECTION

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14. If there is one thing you would like to change about the program, explain what it is and how it would enhance the program.

A BIGGER BUDGET FOR MORE EQUIPMENT.

Thank you for taking the time to complete this survey!

Name: JOE BURZINSKI

Industry Type/Agency: _____

What OCC Program do you advise for : _____

Date Completed: 6/3/08

Please Return To: Latyna A. Roberts
Oakland Community College, Office of State and Federal Programs, AH Campus

Due Date: _____

College Curriculum
Review Committee

DATA COLLECTION

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OAKLAND COMMUNITY COLLEGE
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   e. Strongly Disagree

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College Curriculum
Review Committee

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OAKLAND COMMUNITY COLLEGE
FACULTY PERCEPTIONS OF OCCUPATIONAL PROGRAMS
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OAKLAND COMMUNITY COLLEGE
FACULTY PERCEPTIONS OF OCCUPATIONAL PROGRAMS
(Program Review of Occupational Evaluation - PROE)

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   c. Neutral
   d. Disagree
   e. Strongly Disagree

11. Opportunities are available for me to make suggestions for improvements in this program.

   a. Strongly Agree (circled)
   b. Agree
   c. Neutral
   d. Disagree
   e. Strongly Disagree

12. I think the department has a commitment to student success in the program.

   a. Strongly Agree (circled)
   b. Agree
   c. Neutral
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   e. Strongly Disagree

College Curriculum
Review Committee

DATA COLLECTION

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OAKLAND COMMUNITY COLLEGE
FACULTY PERCEPTIONS OF OCCUPATIONAL PROGRAMS
(Program Review of Occupational Evaluation - PROE)

13. I am satisfied with the direction of this program because ;

    a. I think it prepares students for employment in the workforce.
    b. Working in conjunction with the advisory committee keeps the program going in the right direction.
    c. Feedback that I have received from the students indicates that the program is headed in the right direction.
    d. I know that other programs at other institutions do not compare to OCC.

14. If there is one thing you would like to change about the program, explain what it is and how it would enhance the program.

EXPAND PROGRAM TO KEEP PACE WITH TECHNOLOGY & CURRENT TRENDS → BY OFFERING MORE DIESEL TECHNOLOGY CLASSES, HYBRID & ALTERNATIVE ENERGY CLASSES AND AUTO RESTORATION CLASSES

Thank you for taking the time to complete this survey!

Name: JEFF BURDZINSKI /B./

Industry Type/Agency: AUTO

What OCC Program do you advise for : AUTO TECHNOLOGY

Date Completed: 5/13/2008

Please Return To: Letyna A. Roberts
Oakland Community College, Office of State and Federal Programs, AH Campus

Due Date: _____

Hildebrandt, Harry A

From: Orlowski, Martin A
Sent: Tuesday, March 11, 2008 11:00 AM
To: Hildebrandt, Harry A
Cc: CRC; Khan, Tahir B; Dolly, Patricia; Maze, Mary C
Subject: Automotive Servicing Curriculum Review

Hello Tony,

At the request of the Curriculum Review Committee (CRC) and in support of your efforts to prepare for the up coming Automotive Servicing curriculum review the following major highlights were compiled from a variety of reports which are used in the review process.

- Over the last four years the composite program dashboard score has declined, dropping from 10.08 to 9.69 in 2006-07. This trend should be interpreted as an early warning of potential challenges facing the program. Yet in 2006-07, the ATA curriculum still ranked 30th out of 99 curriculum tracked in the Program Dashboard.

- Although the composite dashboard score has declined over the past four years, none of the established benchmarks fell into the trouble (red) zone during 2006-07. Importantly, three of the seven dashboard measure exceeded their established benchmarks, which included the sections filled to capacity, the percent of minority students, and the student course completion rate.

- While the percent of sections filled to capacity has steadily increased over the last four years, the number of canceled sections has steadily increased. During 2006-07, 79% of offered ATA sections were completed, while college-wide 91% of offered sections are completed.

- The percent of minority students has remained fairly consistent for the past four years and most recently was at 25% in 2006-07. Despite this percent falling below the college-wide 28%, it still exceeded the target score of 18.8%. In addition, the student course completion rate has fluctuated in this time period and remained above the college-wide average in 2006-07, 78% compared to approximately 68%.

- Enrollment trends indicate that after a ten-year low of 888 credit hours in 1997-98, there was an upward trend in enrollment starting in 2000-01 and reached 2,440 in 2003-04. From this time forward, the number of credit hours has remained steady. In addition, during 2006-07, ATA courses ranked 40th in credit hour generation among all curriculum at the college.

- Over the last ten years, there's been an average of approximately 3 Certificates and 5 Associate Degrees awarded per year. It is worth mentioning that in 2005-06, there was an unusual spike of Certificates awarded with a total of 11. Between 1997-98 and 2006-07 a total of 28 Certificates and 52 Associate Degrees have been awarded in the program.

- Two occupations were identified which pertain to the Automobile Servicing program. These include Automotive Service Technician/Mechanics and also Bus/Truck Mechanics, Diesel Engine Special. According to CCbenefits Inc., there were approximately 10,400 Automotive Service Technicians and Mechanics in the four-county region of southeast Michigan in 2007 and 1,100 new and replacement jobs in this occupation are projected in the next five years. Showing a smaller number of new and replacement jobs, yet still growth, is the occupation involving bus and truck mechanics. In 2007, there were 3,570 jobs and the projected addition of 282 jobs for 2012.

- In terms of program assessment, the Automobile Servicing assessment plan has nine unique Learning Outcomes and has a total of eleven Benchmarks, which is in accordance with the guidelines established by the Student Outcomes Assessment Committee.

- However, between February 2007 and February 2008, there was no indication that assessment had taken place with these eleven benchmarks.

The reports which support these highlights have been put into a binder and will be sent to you and CRC Chair Gail Mays. If you have any questions, please feel free to call me at 3882.

Martin Orlowski, Director
Assessment & Effectiveness
Oakland Community College
27055 Orchard Lake Road
Building M, Room 117
Farmington Hills, Michigan 48334

Information on program assessment as well as assessment of General Education Outcomes can be found at www.oaklandcc.edu\assessment

Automobile Servicing
Major Highlights
March 2008

Overview

The information presented in this binder represents supporting reports and data associated with the CRC's review of the Automobile Servicing program. These documents are intended to provide a historical perspective, as well as an idea of current strengths and future challenges facing the program which may impact short and long term curriculum development.

Major Highlights

- Over the last four years the composite program dashboard score has declined, dropping from 10.08 to 9.69 in 2006-07. This trend should be interpreted as an early warning of potential challenges facing the program. Yet in 2006-07, the ATA curriculum still ranked 30th out of 99 curriculum tracked in the Program Dashboard.

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Source: OCC, Office of Assessment & Effectiveness

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Source: OCC, Office of Assessment & Effectiveness

Prof. Harry A. Hildebrandt, OCC
Automotive, Diesel, Quality Assurance and Fluid Power

19831 Maxine
St. Clair Shores, MI 48080
586.779.5674 / 586. 779.3003 Fax
313.618.5922 Cell
mvmeta@aol.com

Education: M.S. Industrial Education, B.S. Vocational Education, Wayne State University
3 years, Mechanical Engineering, Detroit Institute of Technology
Certificate, Computer Integrated Manufacturing (CATIA), Oakland Comm. College

Harry is a Professor in the Vehicle Design Program for Central Michigan University, Detroit Region, teaching G D & T, HVAC Design, Vehicle Electrical and Electronic Design, Cockpit Design, Management of Quality and Mechanical Design Problem Solving. Registrar Representative for AIB-Vincotte USA Inc. ISO 9000, QS 9000, ISO/TS 16949 and ISO 14000. For the past 25 years, Harry has been a professor in Oakland Community College's Department of Applied & Engineering Technology at the Auburn Hills, Michigan campus, where he teaches: Motor Vehicle Technology (Auto, Diesel, Truck & Heavy Equipment, Marine Power Plants, and Hybrid Vehicles); Quality Assurance (Six Sigma) (QS 9000 - ISO 9000) (ISO/TS 16949); and Fluid Power. As President of Motor Vehicle Manufacturers Educational & Training Associates for 21 years, Harry has been responsible for design, development, and implementation of unique and innovative educational programs for engineering, manufacturing, and the service sector, providing consulting, Quality audits, Lean Manufacturing evaluations, and Six Sigma Continuous Improvement strategies, plus failure analysis and accident reconstruction, worldwide. He has been a Six Sigma Black Belt for 18 years, long before the classification existed.
Harry has 40 years experience directly related to the automotive industry in education, servicing, engineering, manufacturing, quality assurance, design, and problem solving. In addition, he previously worked for Chevrolet Engineering, U.S. Army - Vietnam, L.T.V. Michigan Aerospace Division, General Dynamics Land Systems, and vehicle service centers.
Professional Memberships: Society of Automotive Engineers; SAE Foundation (37 years); became a Sessions Co-Leader for Advanced Powerplant Concepts, Diesel Engine and Components, and Hybrid Electric Vehicle Technology SAE Worldwide 2008; Society of Manufacturing Engineers; Servicing Technicians Society; Faculty Advisor, SAE Student Chapter, C.M.U. Detroit Region 2002-2008; National Auto Service Task Force Committee (NASTF), SAE 2005-2008; Accident Investigation and Reconstructive Practices Standards Committee (AIRP), SAE 2005-2008; Fire Safety and Investigations Standards Committee, SAE 2005-2008 (as part of a team, currently rewriting the standards handbook), Service Technology Program Office (Motor Vehicle Diagnostic Standards Development Task Force) 2005-2008; Automatic Transmission Standards Committee 2006-2008.

RESUME

HARRY A. HILDEBRANDT
19831 Maxine
St. Clair Shores, Mich. 48080 Phone: (586)779-5674

W O R K E X P E R I E N C E

FROM SEPT. 1979 PROFESSOR, DEPARTMENT OF APPLIED AND ENGINEERING TECHNOLOGY
TO AUTOMOTIVE SERVICE & TECHNOLOGY
DIESEL AND HEAVY EQUIPMENT
QUALITY ASSURANCE
PRESENT FLUID POWER

Oakland Community College
Auburn Hills Campus
2900 Featherstone Road
Auburn Hills, Michigan 48236-2845

Dept. Chairman, Applied Technology (1982-88)
Coordinator, S.P.C. Training for Oakland County (1984-88)

Committee Involvement
Chairman, Apprentice Advisory Committee
Automotive Advisory Committee
Robotics Advisory Committee
QAT Advisory Committee
Fluid Power Advisory Committee

Member, Academic Senate
Curriculum Committee
Bldg., Site & Facilities Committee
Excellence in Higher Education Committee

INSTRUCT THE FOLLOWING COURSES:

Automotive Service & Technology		Diesel Truck & Heavy Equipment	
ATA 110	Brakes	DHE 110.4	Diesel Engines
ATA 120	Alignment	DHE 115	Sub Assembly Rebuilding
ATA 130	Electrical	DHE 120	Diesel Tune-Up
ATA 140	Engine Support	DHE 125	Fuel Injection Systems
ATA 150	Drivability & Performance	DHE 132.4	On-Highway Drive Trains
ATA 160	Automatic Transmission	DHE 140	Air Brake Systems
ATA 170	Manual Transmission	DHE 150	On-Highway Drive Trains
ATA 180	Air Conditioning	DHE 210.4	Off-Highway Drive Trains
		TEA 133	Diesel Automatic Trans.

INSTRUCT THE FOLLOWING COURSES: (Cont'd - Page 2)

Manufacturing Systems

Hydraulics & Pneumatics

ATF 140	Basic Hydraulics
ATF 143	Components & Circuits
ATF 147	Pneumatics
ATF 148	Components & Circuits
ATF 250	Forces & Mechanics

Computer Integrated Manufacturing

CIM 110	Introduction
CIM 210	Plant Networking
CIM 220	Machine Tool Communication
CIM 230	Flexible Manufacturing Systems

Supportive Courses

TEM 102	Introduction to Algebra
APM 811	Geometry - Algebra
APM 821	Plane Trigonometry
APM 823	Solid Trigonometry
APP 815	Applied Physics
APP 816	Applied Physics II
TED 103	Basic Blueprint Reading
APT 817	Rigging
APT 827	Gears and Gearing
APT 831	Industrial Safety
APT 853	Strength of Materials

Robotics

ROB 150	Introduction to Robotics
ROB 152	Manipulator Drives & Linkages
ROB 160	Servo Systems Repair & Calibration
ROB 162	CAD/CAM Industrial Robotics (Programming)
ROB 166	Instrumentation & Transducers
ROB 226	Automatic Lubrication Systems

Quality Assurance Technology

QAT 100	Total Quality Control
QAT 101	Principles of Quality Assurance
QAT 102	Interpretation of Data
QAT 104	G. D. & T. (1994)
CMM & CMM Techniques	
S.P.C.	Techniques & Implementation
QAT 106	Metrology
QAT 230	Quality Cost Control
QAT 260	Non-Destructive Testing
QAT 262	Procurement
QAT 205	Configuration Management
ISO 9001, 9002 & 9003	
QS 9000	QS 9000-2000
ISO 14000	
TS 16949-2002	
6-Sigma - Lean - Kizan	

O T H E R S K I L L S A N D I N F O (Page 7)

Licensed Master Mechanic, State of Michigan, Auto - Truck - Motorcycles - and Recreational Vehicles.

Certified General Auto Mechanic, National Institute for Automotive Service Excellence.

Experienced in the use of machine shop equipment (mill, lathes, surface grinder, shaper and drill press), testing equipment, instrumentation and welding (gas, arc, heliarc).
Also, experienced in C.A.D. systems, C.N.C. lathes, mills, C.C.M.M., and Robotic applications.

Classified as Master Technician (Chevrolet) while employed at Ted Ewald Chevrolet.

Possessed "Secret" government clearance while employed at L.T.V.

Affiliate member of S.A.E. Member of S.M.E.

E D U C A T I O N

High School: Graduated Wilbur Wright High School, 1962.
Majored in Auto Mechanics.

College: Detroit Institute of Technology, 3 years (1969-72).
Majored in Mechanical Engineering.

Graduated, Wayne State University:
B.S., Industrial Education, 1976
M.Ed., Vocational Education, 1978

Ferris State University: Passed National Occupational Competency Test in Auto Mechanics, May 1974.

Oakland Community College: Completed 24 hours in Computer Integrated Manufacturing, 1990.

Miscellaneous: General Motors Training Center, Chrysler Training Center and Ford Training Center - Classes in auto electric, front-end alignment, air conditioning, engine overhaul, carburetion and tune-ups.

Sun Auto Electric - Starter motors and charging systems.

E D U C A T I O N (Cont'd - Page 8)

State of Michigan: Vocational Certification - Automotive, since 1974.

S E R V I C E R E C O R D

U.S. Army, Infantry, 2 years (Jan. 1967-Jan. 1969) - Hon. Discharge Combat Assignment, 25th Infantry Division, Vietnam, July 1967 to July 1968, Squad Leader and Platoon Sergeant (Rank: Sergeant E5).