MASTER SYLLABUS

WASHTENAW COMMUNITY COLLEGE

Course Discipline Code & No: ASV 151 **Title:** Automotive Service I **Effective Term** Fall 2009

Division Code: VCT **Department Code:** AUTD **Org #:** _____

Don't publish: ☐ College Catalog ☐ Time Schedule ☐ Web Page

Reason for Submission. Check all that apply.

- ☒ New course approval
- ☐ Three-year syllabus review/Assessment report
- ☒ Course change
- ☐ Reactivation of inactive course
- ☐ Inactivation (Submit this page only.)

Change information: Note all changes that are being made. Form applies only to changes noted.

- ☐ Consultation with all departments affected by this course is required.
- ☒ Course discipline code & number (was ASV 141)*
  *Must submit inactivation form for previous course.
- ☐ Course title (was _____)
- ☒ Course description
- ☒ Course objectives (minor changes)
- ☐ Credit hours (credits were: _____)
- ☒ Total Contact Hours (total contact hours were: 120)
- ☒ Distribution of contact hours (contact hours were: lecture: 30 lab 90 clinical _____ other _____)
- ☐ Pre-requisite, co-requisite, or enrollment restrictions
- ☐ Change in Grading Method
- ☐ Outcomes/Assessment
- ☐ Objectives/Evaluation
- ☐ Other _____

Rationale for course or course change. Attach course assessment report for existing courses that are being changed.

Course is being re-written as part of the overall program update. Small automotive engine work will replace small air-cooled engines.

Approvals Department and divisional signatures indicate that all departments affected by the course have been consulted.

Department Review by Chairperson ☐ New resources needed ☐ All relevant departments consulted

Print: Allen Day Signature [signature] Date: 10/29/2009
Faculty/Preparer

Print: Russ Ferguson Signature [signature] Date: 10/29/2009
Department Chair

Division Review by Dean

☐ Request for conditional approval

Recommendation ☒ Yes ☐ No [signature] 10/29/09
Dean's/Administrator's Signature Date

Curriculum Committee Review

Recommendation _____

☐ Tabled ☒ Yes ☐ No [signature] 12/8/09
Curriculum Committee Chair's Signature Date

Vice President for Instruction Approval

[signature] 12/10/09
Vice President's Signature Date

Approval ☒ Yes ☐ No ☐ Conditional

Do not write in shaded area.
Log File 11/10/09 sj/ Ecopy ☐ Banner _____ C&A Database _____ C&A Log File _____ Basic skills ☐ Contact fee ☐

Please return completed form to the Office of Curriculum & Assessment and email an electronic copy to sjohn@wccnet.edu for posting on the website.

***Complete ALL sections which apply to the course, even if changes are not being made.**

Course: ASV 151	**Course title:** Automotive Service I

Credit hours: 4 If variable credit, give range: _____ to _____ credits	**Contact hours per semester:** Student / Instructor Lecture: 45 / 45 Lab: 60 / 60 Clinical: – / – Practicum: – / – Other: – / – **Totals:** 105 / 105	**Are lectures, labs, or clinicals offered as separate sections?** ☐ Yes - lectures, labs, or clinicals are offered in separate sections ☒ No - lectures, labs, or clinicals are offered in the same section	**Grading options:** ☐ P/NP (limited to clinical & practica) ☐ S/U (for courses numbered below 100) ☒ Letter grades

Prerequisites. Select one:

☒ College-level Reading & Writing ☐ Reduced Reading/Writing Scores (Add information at Level I prerequisite) ☐ No Basic Skills Prerequisite (College-level Reading and Writing is not required.)

In addition to Basic Skills in Reading/Writing:

Level I (enforced in Banner)

	Course	Grade	Test	Min. Score	Concurrent Enrollment (Can be taken together)	Corequisites (Must be enrolled in this class also during the same semester)
					☐	
☐ and ☐ or					☐	
☐ and ☐ or					☐	
☐ and ☐ or					☐	

Level II (enforced by instructor on first day of class)

	Course	Grade	Test	Min. Score
☐ and ☐ or				
☐ and ☐ or				

Enrollment restrictions (In addition to prerequisites, if applicable.)

☐ and ☐ or Consent required ☐ and ☐ or Admission to program required Program: _____ ☐ and ☐ or Other (please specify): _____ _____

Please send syllabus for transfer evaluation to:
Conditionally approved courses are not sent for evaluation.
Insert course number and title you wish the course to transfer as.

☐ E.M.U. as _____ ☐ _____ as _____
☐ U of M as _____ ☐ _____ as _____
☐ _____ as _____ ☐ _____ as _____

Course: ASV 151	**Course title:** Automotive Service I

Course description State the purpose and content of the course. Please limit to 500 characters.	In this course students will learn basic shop safety and accepted shop practices. Included in this course is the theory and operation of automotive gasoline engines – disassembly, measurements, assembly and project organization. Students will learn underhood and undercar preventative maintenance theory and practice as well as general mechanical skills. The focus of this course allows students to gain practical experience in the laboratory.	
Course outcomes List skills and knowledge students will have after taking the course. **Assessment method** Indicate how student achievement in each outcome will be assessed to determine student achievement for purposes of course improvement.	**Outcomes** (applicable in all sections)	**Assessment** Methods for determining course effectiveness
	Recognize and apply general shop rules, procedures and safety standards	Common departmental exam; NATEF checklist
	Identify and properly use various shop tools	Common departmental exam; NATEF checklist
	Recognize and perform proper tire service skills	Common departmental exam; NATEF checklist
	Recognize and perform regular fluid and lubrication service skills	Common departmental exam; NATEF checklist
	Identify and perform basic exhaust repairs	Common departmental exam; NATEF checklist
	Identify various parts and how they interact in an automotive gasoline engine	Common departmental exam; NATEF checklist
Course Objectives Indicate the objectives that support the course outcomes given above. **Course Evaluations** Indicate how instructors will determine the degree to which each objective is met for each student.	**Objectives** (applicable in all sections)	**Evaluation** Methods for determining level of student performance of objectives
	Identify and follow general shop rules and procedures Complete online safety training	National Automotive Technicians Education Foundation standards: Using the Rubric task lists signed by the Instructors
	Identify and interpret vehicle identification numbers Find and utilize service information Mitchell On-Demand All Data	National Automotive Technicians Education Foundation standards: Using the Rubric task lists signed by the Instructors
	Demonstrate the proper use of a 2-post lift Demonstrate proper usage of floor jacks Identify various shop tools Hand tools Power tools Recognize the various purposes of threaded fasteners Standard Metric Identify and demonstrate the use of tap-and-die sets	National Automotive Technicians Education Foundation standards: Using the Rubric task lists signed by the Instructors • Engine Repair – Section A. General Engine Diagnosis • Tasks 1 - 3 • Automatic Transmission and Transaxle – Section A. General Transmission and Transaxle Diagnosis • Tasks 1 - 3
	Recognize tire construction Steel-belted Low-profile Bias-ply Tubeless Interpret tire sidewall markings Passenger/light truck Normal width in millimeters Aspect ratio Construction Rim diameter Load Index	• Steering and Suspension – Section A. General Suspension and Steering Diagnosis • Tasks 1 - 3 • Electrical/Electronic Systems – Section A. General Electrical System Diagnosis • Tasks 1 - 3 • Engine Performance – Section A. General Engine Diagnosis • Tasks 1 - 3

	Speed rating Demonstrate removal and replacement of a tire and flat repair Identify proper tire inflation per vehicle Recognize low-pressure warnings Reset sensors Tread-wear Traction Temperature Demonstrate how to balance and rotate a wheel and tire Replace valve stems, lug studs and lug nuts Recognize the effects of changing tire size on vehicle performance Identify tread wear Demonstrate how to check vehicle fluids Demonstrate how to add fluids to the vehicle when needed Recognize the importance of transmission fluid replacement Exemplify proper oil change procedures Identify fluid leaks Follow proper disposal of vehicle fluids and parts Perform lubrication techniques per vehicle specifications Recognize the importance of vehicle pre-inspection Discuss the significance of ASE rules and regulations as they apply to automotive mechanics Perform fluid change on a rear differential Identify major parts of an engine Describe the four-stroke cycle Define common engine terms Analyze the function of several major engine parts Utilize proper safety practices when working with engines Identify the function of the cooling system Compare the design of various cooling systems Describe construction of major cooling system components Demonstrate proper safety procedures when working with cooling systems Recognize parts of an exhaust system Demonstrate exhaust system repairs	• Miscellaneous Diagnosis – Section F. • Tasks 1 – 2 • Wheels and Tires Diagnosis – Section E. • Tasks 1 – 10 • Lubrication – Section D. • Tasks 1 – 3, 11 – 13 • Transmissions – Section C. • Tasks 3 – 4 • Manual Drive trains – Section A. • Tasks 1 – 5 • Engine Repair – Section A. • Tasks 4 – 7 • Automatic Transmissions – Section A. • Tasks 1 – 5 • Automatic Transmissions – Section E. • Tasks 1 – 4 • Engine – Section A. • Tasks 1 – 10 • Engine – Section D. • Tasks 3 – 7, 10 • Engine Lubrication and Cooling – Section D. • Tasks 3 – 7, 10 • Electrical Systems – Section A. • Tasks 1 – 14, 17 • Engine Performance – Section A. • Tasks 1 – 3 • Engine Performance – Section B. • Tasks 1 – 8 • Electrical – Section A. • Tasks 1 – 17 • Electrical – Section B. • Tasks 1 – 7 • Starting System Diagnosis – Section C. • Tasks 1 – 6 • Starting System Diagnosis – Section D. • Tasks 1 – 5 • Engine Repair – Section D. • Tasks 4 – 12 • Engine Performance – Section D. • Tasks 11 – 13 • Engine Performance – Section E. • Tasks 1 EGR, 2 EGT, 3 IAT, 4 EFE, 5 EVAP

List all new resources needed for course, including library materials.
None

Student Materials:

List examples of types		Estimated costs
Texts	Automotive Service, 3rd Edition; Tim Gills; Delmar Publishing; ISBN – 10:1-4180-3758-3	$ 122.00
Supplemental reading		
Supplies		
Uniforms	Automotive Service Lab Manual	$ 30.00
Equipment	Safety Glasses, Closed Toe Leather Shoes, Long Pants	
Tools		
Software		

Equipment/Facilities: Check all that apply. (All classrooms have overhead projectors and permanent screens.)

Check level only if the specified equipment is needed for all sections of a course.

- ☐ Level I classroom
  Permanent screen & overhead projector
- ☐ Level II classroom
  Level I equipment plus TV/VCR
- ☒ Level III classroom
  Level II equipment plus data projector, computer, faculty workstation

- ☐ Off-Campus Sites
- ☐ Testing Center
- ☒ Computer workstations/lab
- ☐ ITV
- ☐ TV/VCR
- ☐ Data projector/computer
- ☐ Other _____

Assessment plan:

Learning outcomes to be assessed (list from Page 3)	Assessment tool	When assessment will take place (semester & year)	Course section(s)/other population	Number students to be assessed
Recognize and apply general shop rules, procedures and safety standards	Common departmental exam; NATEF checklist	Fall 2011 and every three years thereafter	All sections	All students enrolled
Identify and properly use various shop tools	Common departmental exam; NATEF checklist	Fall 2011 and every three years thereafter	All sections	All students enrolled
Recognize and perform proper tire service skills	Common departmental exam; NATEF checklist	Fall 2011 and every three years thereafter	All sections	All students enrolled
Recognize and perform regular fluid and lubrication service skills	Common departmental exam; NATEF checklist	Fall 2011 and every three years thereafter	All sections	All students enrolled
Identify and perform basic exhaust repairs	Common departmental exam; NATEF checklist	Fall 2011 and every three years thereafter	All sections	All students enrolled
Identify various parts and describe how they interact in an automotive gasoline engine	Common departmental exam; NATEF checklist	Fall 2011 and every three years thereafter	All sections	All students enrolled

Scoring and analysis of assessment:

1. Indicate how the above assessment(s) will be scored and evaluated (e.g. departmentally developed rubric, external evaluation, other). Attach the rubric/scoring guide.

   Common departmental exam will be scored using an answer sheet
   NATEF checklist will be scored using the departmentally-developed rubric (attached).

2. Indicate the standard of success to be used for this assessment.

   70% of the students will score an overall average of 70% or higher

3. Indicate who will score and analyze the data (data must be blind-scored).

Departmental faculty will blind-score data when possible.

4. Explain the process for using assessment data to improve the course.

Assessment data will be evaluated to identify any areas of weakness. Program and course instruction will be reviewed to identify ways to improve student performance.