

Course Discipline Code & No: CCC 290 Title: Mobile Electronics Effective Term Winter 2010
 Division Code: VCT Department Code: ABDD Org #: 14110
 Don't publish: ☐ College Catalog ☐ Time Schedule ☐ Web Page

Reason for Submission. Check all that apply.

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

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. ☐ Total Contact Hours (total contact hours were: _____)
☐ Course discipline code & number (was _____)* ☐ Distribution of contact hours (contact hours were: _____)
 *Must submit inactivation form for previous course. lecture: _____ lab _____ clinical _____ other _____
☐ Course title (was _____) ☐ Pre-requisite, co-requisite, or enrollment restrictions
☐ Course description ☐ Change in Grading Method
☐ Course objectives (minor changes) ☐ Outcomes/Assessment
☐ Credit hours (credits were: _____) ☐ Objectives/Evaluation
☐ Other _____

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

The SEMA (Specialty Equipment Market Association) show, held November 2009 in Las Vegas, confirmed that after-market mobile electronics represents a sizable portion of the custom car industry. This course will prepare students to take the **Basic Installation Technician Exam** used in hiring employees for stereo and electronics installation companies.

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: Justin Morningstar
 Faculty/Preparer

Signature

Date: 11/17/09

Dept. Chair Recommendation ☒ Yes ☐ No

Print: Gary Sobby
 Department Chair

Signature

Date: 11-17-09**Division Review by Dean**

☒ Request for conditional approval

Recommendation ☒ Yes ☐ No

Dean's/Administrator's Signature

Date: 11-17-09**Curriculum Committee Review**

Recommendation

☐ Tabled

☒ Yes ☐ No

Curriculum Committee Chair's Signature

Date: 2/9/10**Vice President for Instruction Approval**

Approval ☒ Yes ☐ No ☒ Conditional

Vice President's Signature

Date: 11/17/09

Do not write in shaded area.

Log File 11/17/09 Ecopy ☐ Banner 11/17 C&A Database 11/17 C&A Log File 11/17/09 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: CCC 290	Course title: Mobile Electronics
---------------------------	--

Credit hours: <u>4</u> If variable credit, give range: _____ to _____ credits	Contact hours per semester: <table border="1"> <thead> <tr> <th></th> <th>Student</th> <th>Instructor</th> </tr> </thead> <tbody> <tr> <td>Lecture:</td> <td><u>45</u></td> <td><u>45</u></td> </tr> <tr> <td>Lab:</td> <td><u>60</u></td> <td><u>60</u></td> </tr> <tr> <td>Clinical:</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>Practicum:</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>Other:</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>Totals:</td> <td><u>105</u></td> <td><u>105</u></td> </tr> </tbody> </table>		Student	Instructor	Lecture:	<u>45</u>	<u>45</u>	Lab:	<u>60</u>	<u>60</u>	Clinical:	_____	_____	Practicum:	_____	_____	Other:	_____	_____	Totals:	<u>105</u>	<u>105</u>	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
	Student	Instructor																						
Lecture:	<u>45</u>	<u>45</u>																						
Lab:	<u>60</u>	<u>60</u>																						
Clinical:	_____	_____																						
Practicum:	_____	_____																						
Other:	_____	_____																						
Totals:	<u>105</u>	<u>105</u>																						

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 <u>ABR 111</u>	<u>C</u>	_____	_____	☐	_____
☐ and ☐ or <u>ABR 135</u>	<u>C</u>	_____	_____	☐	_____
☐ and ☒ or <u>ASV 152</u>	<u>C</u>	_____	_____	☐	_____
☐ 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

☐ and ☐ or Other (please specify):

Program: _____

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: CCC 290	Course title: Mobile Electronics	
Course description State the purpose and content of the course. Please limit to <u>500</u> characters.	This course covers the principles of mobile automotive electronics and integration of aftermarket electrical upgrades. The emphasis is centered on the planning and installation of performance audio, HID LED lighting, remote start and navigation systems as well as basic harness design and layout. It provides practical and theoretical experience necessary to fully understand the tools, equipment and organization of many custom electrical projects. Students will be prepared to take the Basic Installation Technician Exam to become a Mobile Electronics Certified Professional.	
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
	1. Recognize and apply general shop rules, procedures and safety standards. Identify and properly use various shop tools. 2. Identify and apply basic electrical theory. 3. Properly read and interpret wiring diagrams to perform electrical diagnosis and service skills. 4. Recognize and perform standard audio installation skills and basic lighting upgrades. 5. Install aftermarket parts and describe how they interact with the vehicle's electrical system. 6. Prepare students to successfully complete the Basic Installation Technician Exam.	NATEF checklist Written and practical exam NATEF checklist Written and practical exam NATEF checklist Written and practical exam NATEF checklist Written and practical exam NATEF checklist Written and practical exam Basic Installation Technician Exam by Mobile Electronics Certified Professionals and supported by the Consumer Electronics Association (CEA).
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
	Outcome #1 Identify and conform to general shop rules. Locate safety stations and devices. Properly use various shop tools. Outcome #2 Identify and apply basic electrical theory. Identify and apply Ohm's Law. Identify and apply Watt's Law. Identify and apply Kirchhoff's Current and Voltage Laws. Outcome #3 Read and interpret wiring diagrams and associated symbols. Use wiring diagrams to perform an electrical diagnosis.	

	Determine and perform service skills based on diagnosis. Outcome #4 Identify steps to install a standard radio. Recognize and properly use necessary equipment. Install standard radio. Perform basic lighting upgrades. Outcome #5 Design electrical systems to support aftermarket electronics. Determine the need for power converters, power inverters, outlets and adapters. Prepare to install aftermarket parts and describe how they interact with the vehicles electrical system. Recognize and install aftermarket electronics such as alarms, keyless entry, remote starters, audio equipment, amps and equalizers, speaker packages, cellular and Bluetooth systems and video packages. Recognize and describe the impact of adding equipment onto existing circuitry. Outcome #6 Successfully complete the optional Basic Installation Technician Exam	
--	--	--

List all new resources needed for course, including library materials.

Student Materials:

List examples of types		Estimated costs
Texts Supplemental reading Supplies Uniforms Equipment Tools Software		\$

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

Check level <u>only</u> if the specified equipment is needed for <u>all</u> 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 _____
--	--

Level I equipment plus TV/VCR ☒ Level III classroom Level II equipment plus data projector, computer, faculty workstation	☐ 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. Identify and properly use various shop tools.	NATEF checklist Written and practical exam	Winter 2012 and every three years thereafter	All sections	All students
Identify and apply basic electrical theory.	NATEF checklist Written and practical exam	Winter 2012 and every three years thereafter	All sections	All students
Properly read and interpret wiring diagrams to perform electrical diagnosis and service skills.	NATEF checklist Written and practical exam	Winter 2012 and every three years thereafter	All sections	All students
Recognize and perform standard audio installation skills and basic lighting upgrades.	NATEF checklist Written and practical exam	Winter 2012 and every three years thereafter	All sections	All students
Install aftermarket parts and describe how they interact with the vehicle's electrical system.	NATEF checklist Written and practical exam	Winter 2012 and every three years thereafter	All sections	All students
Prepare students to successfully complete the Basic Installation Technician Exam.	Basic Installation Technician Exam by Mobile Electronics Certified Professionals and supported by the Consumer Electronics Association (CEA).	Winter 2012 and every three years thereafter	All sections	All students

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.

Written and practical exam will be scored using an answer sheet and rubric.

The NATEF checklist will be scored using a rubric.

The optional Basic Installation Technician Exam will be scored by MECP approved testing locations.

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

Students will score an overall average of 80% or higher on the written exam, practical exam and NATEF checklist. 75% of the students taking the optional Basic Installation Technician Exam will become certified.

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

The written exam, practical exam and NATEF checklist will be blind-scored (whenever possible) by departmental faculty. The optional Basic Installation Technician Exam will be scored by MECP approved testing locations.

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

Assessment data will be gathered and evaluated by faculty instructors and other departmental faculty. Areas of weakness will be identified and changes suggested and implemented.