ITEM 110-1902-R0301 ATTACHMENT **March 22-23, 2001**

PROPOSAL

Helena College of Technology
Technical Department

INSTRUCTIONAL PROGRAM LEADING TO:

Certificate
in
Automotive Technology

Fall Semester 2001

PROGRAM DESCRIPTION

Brief Description

The Automotive Technology program of the Technical Department is proposing a change in the length and name of the current two-year certificate in Automotive Technology. The proposal changes the current certificate to a one-year certificate. The name Automotive Maintenance and Light Repair will more accurately describe the course content of the certificate. The certificate-training program is designed to support dealership retail business and is modeled after the Ford Around the Wheel program. While the Maintenance and Light Repair certificate program will rely heavily on the curriculum and tools provided the Helena College of Technology in its partnership with Ford Motor Company, it will not be limited to Ford vehicles.

Needs Assessment

Currently, the Helena College of Technology offers a two-year Associate of Applied Science degree in Automotive Technology in addition to the two-year certificate in Automotive Technology. The only difference between the current certificate and the AAS Degree is the difficulty level of general education classes. Since 1997, only three students have opted for the two-year certificate. This program has a graduation rate of around 38%. Many students leave the program during the first year because they are not able to finish the entire program. Offering a mid program certificate will provide motivation to complete the first year and turn a negative experience into a positive exit. The new length is more consistent with other certificate programs at the Helena College of Technology and more clearly defines the difference between the certificate and the Associate of Applied Science Degree.

Relationship to the Role and Scope of the Institution

This certificate is a perfect fit with the Helena College of Technology's mission to provide technical education that meets the technology-based demands of industry. This certificate will prepare the students for immediate employment.

Impact on Administrative Structure

No revision of the current administration structure is required.

Similar Programs in Montana

Montana State University – Northern

Miles City Community College

Montana State University – Billings College of Technology

Program Accreditation

The proposal meets the standards for accreditation by the Northwest Association of Schools and Colleges.

Proposed Curriculum

Certificate in Automotive Maintenance and Light Repair

Fall Semester

Course Number	Course Title	Credits
AT100	Basic Automotive Electrical	3
AT110	Engine Repair	6
AT120	Electrical Systems	6
MAT100T	Introduction to Technical Math	1
HR100T	Human Relations	2
	Total Credits	**18**

Spring Semester

AT115	Suspension and Steering	5
AT116	Brakes	4
AT125	Heating and Air Conditioning	6
CT105	Introduction to Personal Computers	1
ENG104T	Workplace Communication	2
	Total Credits	**18 (36)**

Individual course descriptions are included at the end of the proposal.

FACULTY AND STAFF REQUIREMENTS

Current Faculty

Current faculty of the Automotive Technology department are:

Dave Jones	Level I
Ed Marsenich	Level I

Both instructors have Masters Certification from the National Institute for Automotive Service Excellence. In order to utilize Ford Motor Company training materials, at least one instructor must be certified by Ford to teach each course. Ed Marsenich is currently in the final phases of certification.

New Faculty

No new faculty will be needed.

Support Personnel

The present level of support personnel will meet program needs.

CAPITAL OUTLAY, OPERATING EXPENSES AND PHYSICAL FACILITIES

Operating Expenditure Needs

It is anticipated that no additional operating expenses will be needed. This certificate benefits students already in attendance.

Library Resources

Library resources are available to support this proposed program.

Facilities and Space

The program will utilize existing facilities at the Donaldson Building on the Helena College of Technology campus. Current facilities are adequate to meet the needs.

EVALUATION OF PROPOSED PROGRAM

Faculty Committee/Council Review

The proposal was reviewed by current students, HCT Automotive Technology faculty, HCT management, and the HCT Academic Affairs committee. It was also reviewed by the HCT Automotive Technology advisory committee of community employers.

Outside Consultants

There have been no outside consultants employed in the preparation of this proposal.

COURSE DESCRIPTIONS

AT100 Basic Automotive Electrical
Credits: 3
Prerequisites: none
This course covers basic electrical theory, magnetism, semiconductor devices, troubleshooting techniques, and wire repair procedures.

AT110 Engine Repair
Credits: 6
Prerequisites: none
This course covers the theory of operation, diagnosis and service procedures associated with engine repair. Students will learn engine theory and will work on engine head and block assemblies and their related components.

AT115 Suspension and Steering
Credits: 5
Prerequisites: none
This course covers theory of operation, diagnosis, and service procedures associated with steering and suspension systems, including computer controlled systems. Students will learn suspension and steering theory and will work on automotive suspension and steering systems.

AT116 Brakes
Credits: 4
Prerequisites: none
This course covers theory of operation, diagnosis, and service procedures associated with braking systems including computer controlled anti-lock systems. Students will learn the theory of brake systems and will work on brake system components.

AT120 Electrical Systems
Credits: 6
Prerequisites: none
This course covers theory of operation, diagnosis and service procedures associated with automobile electrical systems including lighting circuits, starting and charging system, instrumentation, power accessories and passive restraint systems.

AT125 Heating and Air Conditioning
Credits: 6
Prerequisites: none
This course covers basic air conditioning theory, system diagnosis, and service procedures, including (computerized) controlled air conditioning systems. The student will learn the theory of air conditioning and work on systems and system components.