



Dear Prospective Student:

Thank you for your interest in the Ford Automotive Student Service Educational Training (ASSET) program at Des Moines Area Community College.

The ASSET program seeks people like you who are willing to work hard toward a goal: a rewarding career in a Ford / Lincoln dealership.

ASSET is one of the finest examples of cooperation between the automotive repair industry and a community college. You'll earn an Associate in Applied Science (AAS) degree in Automotive Technology, while working at a sponsoring Ford / Lincoln dealership. When you successfully complete the program, you will then work full-time for the dealer.

Ford Motor Company, Ford / Lincoln dealers and DMACC have invested hundreds of thousands of dollars to provide you with the best automotive training available. In the ASSET program, you'll learn hands-on skills from highly qualified instructors who receive the very latest in training from Ford.

Most importantly, you'll work and learn on late model-cars – just like you'll work on at the dealership. Ford provides DMACC with cars equipped with the latest in automotive technology, including Hybrid, EcoBoost powertrain, High-speed module communication . Ford has also supplied the ASSET program with IDS, a computerized interface to communicate with Ford Motor Company's computers.

Are you ready to get started? A DMACC instructor will be happy to provide you additional information and a tour of our state-of-the-art facilities. You'll soon be on your way to a great future.

Please contact us!

## **FORD/DES MOINES AREA COMMUNITY COLLEGE, ANKENY, IOWA AUTOMOTIVE STUDENT SERVICE EDUCATIONAL TRAINING PROGRAM**

The Ford Automotive Student Service Educational Training Program (ASSET) is a two-year automotive program designed to educate and train individuals for careers as Ford automotive service technicians. The curriculum, designed jointly by Ford Motor Company and Des Moines Area Community College (DMACC) leads to an Associate in Applied Science degree. The program involves Ford products at DMACC. In addition, the student will intern at a sponsoring Ford / Lincoln dealership.

### **Prospective ASSET Student Qualifications**

To be eligible for the ASSET Program, applicants must:

1. Be eighteen (18) years of age or older by the time of first dealer work assignment.
2. Be a high school graduate or equivalent.
3. Be able to meet the school's ASSET admission and academic requirements.
4. Be sponsored by Ford/Lincoln dealer.
5. Hold a valid driver's license.

### **Program Schedule**

The program length is five semesters. Half the time is spent attending classes at DMACC with the remaining time spent as an intern in a sponsoring Ford / Lincoln dealership. Each specialized subject is taught in DMACC classrooms and laboratories for a specific number of weeks. This academic training is then followed by related work experience with dealership personnel, which is closely related to the course work completed at DMACC.

### **Dealer Sponsorship**

Since considerable time is spent at the dealership, it is a requirement of the program that each student be sponsored by a Ford / Lincoln dealer. Students will receive assistance in locating a sponsoring dealer if they need help. The dealership will provide training-related employment for the student during his/her work experience periods. Since students earn while they learn, a considerable portion of the cost involved in the program is offset.

### **Work Experience Coordinator**

An ASSET instructor will also serve as the work experience coordinator. This arrangement provides him with immediate feedback on the effectiveness of the instruction. The in-dealership coordinator works closely with the ASSET student and his/her college instructor which results in the best possible application of college instruction being reinforced through work assigned at the dealership.

The ASSET work experience coordinator has contact with the students bi-monthly. ASSET students log their work experience daily and submit these reports weekly. During the work internship, the ASSET work experience coordinator, the in-dealership coordinator, and the ASSET student have at least two formal conferences. At each visitation the ASSET work coordinator completes a dealership and student report. These reports are shared with the dealership coordinator and student at the conclusion of the internship. A copy also goes into the ASSET student's file.

## **Student Wages**

An advisory committee made up of community representatives from business, industry and/or labor will make recommendations on pay rates. Dealerships may wish to follow these recommendations or establish their own pay scale.

Generally, a dealership does not pay the student while he/she attends school. The sponsor does not buy the student's tools and they do not pay the student's tuition.

## **Program Costs**

All tuition, fees and textbooks costs are the responsibility of the student. In addition, students are responsible for the purchase of a prescribed basic hand tool set (see list on page 9). These tools will generally be needed by the first week of classes. The cost of the total set will vary, depending on the brand name you choose. DMACC staff members will assist students in obtaining an educational discount for most popular tool brands, or they may use their own existing set if it meets ASSET requirements.

For current prices for tuition, fees, and textbooks, please contact the DMACC Information Office at (515) 964-6200 or ASSET personnel at (515) 697-7784.

## **Financial Aid**

All financial assistance available to DMACC students is administered by the Ankeny Campus Financial Aid Office. Students may receive assistance in the form of scholarships, grants, loans, and/or part time employment. Contact the Financial Aid Office at (515) 964-6282 or check the DMACC website for more specifics. [www.dmacc.edu](http://www.dmacc.edu)

## **Program Benefits**

The ASSET program requires some effort on the part of the student. However, the benefits are worth the effort. The skills, knowledge and potential of those who complete the ASSET program are far superior to most other automotive programs. This balanced in-depth program offers the student a basis for development and progress within the dealer's organization.

The student receives the knowledge necessary for entry into a high-technology profession, along with the opportunity to practice and develop his/her skills with a considerable amount of on-the-job training while working on late model automobiles at a sponsoring dealership. The ASSET program strives to prepare students with the aptitude to succeed in the automotive repair industry.

If you would like more information on these topics, please contact an ASSET instructor (see page 11).

## STUDENT FINANCIAL PLANNING GUIDE

	Fall Semester	Spring Semester	Summer Term	Fall Semester	Spring Semester	Total Cost
Tuition & Fees**	\$ 2,890	\$ 2,380	\$2,210	\$ 2,380	\$ 2,550	\$ 12,410
Tools***	\$ 4,000	\$	\$	\$	\$	\$ 4,000*
Books*	\$ 450	\$	\$ 300	\$	\$ 150	\$ 900*
<b>Total*</b>	<b>\$ 7,340</b>	<b>\$ 2,380</b>	<b>\$ 2,510</b>	<b>\$ 2,380</b>	<b>\$ 2,700</b>	<b>\$ 17,310*</b>

\* Costs are approximate figures.

\*\* Des Moines Area Community College reserves the right to change tuition and fees.

\*\*\* Tool cost includes substantial initial discounts. Your investment may vary from these cost estimates depending on brand purchased.

### Tuition

Tuition for credit offerings (resident students):

Full or part-time enrollment (per credit) . . . . . \$170.00\*

### Housing

Des Moines Area Community College does not provide housing. Housing is available on the Ankeny campus, through an independent rental company. You can contact them at 515-964-7474 or [www.campusviewstudenthousing.com](http://www.campusviewstudenthousing.com)

There are also two other student focused apartment complexes adjacent to the Ankeny campus. Contact information for them is;

Prairie Pointe Student Living, [www.prairiepointliving.com](http://www.prairiepointliving.com), or call 515-422-9882

Campus Town Student Housing, [laurastein@houserdevelopment.com](mailto:laurastein@houserdevelopment.com) or call 515-289-0700

There is also off campus housing through various other sources. For more information on housing opportunities contact the DMACC Housing Office at (515) 964-6200.

## FORD ASSET PROGRAM SCHEDULE

COURSES	CREDITS	AT DMACC	AT DEALERS
<u>FALL</u>			
ATF 312 Ford Automotive Electrical	5	First 8 weeks of semester	Second 8 weeks of semester plus break
ATF 317 Shop Fundamentals & Minor Serv.	3		
ATF 320 Technical Internship 1	3		
MAT 772 Applied Math	3		
SPC 122 Interpersonal Speech	3		
	Total 17		
<u>SPRING</u>			
ATF 328 Ford Electronic Systems Diag	5	First 8 weeks of semester	Second 8 weeks of semester plus break
ATF 325 Ford Brake Systems	3		
ATF 324 Ford Steer/Suspension	3		
ATF 330 Technical Internship 2	3		
	Total 14		
<u>SUMMER</u>			
ATF 326 Ford Auto Air Condition Systems	3	Entire 10 week semester	
ATF 333 Ford Engine Diagnosis/Repair	4		
PHY 710 Technical Physics	3		
COM703 Communication Skills	3		
	Total 13		
<u>FALL</u>			
ATF 336 Ford Fuel Systems & Injection	3	Second 8 weeks of semester	First 8 weeks of semester plus break
ATF 337 Ford Drivability & Emissions	4		
ATF 346 Ford Transmission & Transaxles	4		
ATF 340 Technical Internship 3	3		
	Total 14		
<u>SPRING</u>			
ATF 350 Technical Internship 4	3	Second 8 weeks of semester	First 8 weeks of semester plus break
ATF 344 Ford Driveline & 4x4 Diag/Rep	2		
ATF 352 Ford Systems/Technology Update	3		
ATF 362 Ford Diesel Eng. Service & Oper	4		
MTG 145 Human Relations in Business	3		
	Total 15		
		Total Credits	73

**DMACC reserves the right to change the sequence of courses as needed.**

## ASSET CURRICULUM

**ATF 317 Ford Shop Fundamentals & Minor Service Credits: 3**

Course description: A study of dealership organizational structure as it relates to the technician. Use of service manuals, electronic troubleshooting manuals and service bulletins are practiced. Also provides entry level automotive task competencies.

**ATF 324 Ford Steering and Suspension Credit: 3**

Instruction in the theory of operational service procedures used in the maintenance and repair of Ford Motor Company's steering and suspension systems.

**ATF 325 Ford Brake System and Service Credit: 3**

Instruction in the theory of operational service procedures used in the maintenance and repair of Ford Motor Company's brake systems.

**ATF 312 Ford Automotive Electrical Credits: 5**

Course description: A study of the electrical and electronics systems used in Ford Motor Company vehicles. The instruction will include fundamentals of electricity, series and parallel circuits, schematics, wire repair, diodes, transistors, microprocessors, and digital displays.

**ATF 328 Ford Electronic Systems Diag Credits: 5**

Course description: Instruction in the diagnosis, repair and service of electrical and electronic components and accessories used on current Ford Motor Company vehicles.

**ATF 320 Technical Internship I\* Credits: 3**

Course description: Work experience at a sponsoring dealership. The tasks will be consistent with the technician's ability and previous course work.

**ATF 326 Ford Automotive Climate Ctrl Credits: 3**

Course description: Theory and operation of Ford Motor Company air conditioning systems leading to the diagnosis, service and repair of current models of vehicles.

**ATF 330 Technical Internship II\* Credits: 3**

Course description: Work experience at a participating dealership. The tasks will be consistent with the technician's ability and previous course work.

**ATF 333 Ford Engine Diagnosis/Repair Credits: 4**

Course description: Evaluating, reconditioning, and replacing of major components of Ford Motor Company engines. Will include instruction in machining operations performed in Ford Motor Company dealerships.

**ATF 336 Ford Fuel Systems and Injection Credits: 3**

Course description: Introduction to the different types of fuels and theory of basic fuel delivery systems including diagnosis, repair and or replacement of components in Ford electronic engine control systems.

**ATF 337 Ford Drivability & Emissions Credits: 4**

Course description: Diagnosis and service of microprocessor controlled fuel and ignition systems. Oscilloscopes, engine analyzers, digital meters, and other high technology instruments will be used.

**ATF 340 Technical Internship III\* Credits: 3**

Course description: Work experience at a sponsoring dealership. The tasks will be consistent with the technician's ability and previous course work.

**ATF 344 Ford Driveline & 4x4 Diagnosis/Repair Credits: 2**

Course description: Students will study rear axle and differential design and operation, driveshaft construction, transfer case design and operations. Students will also perform diagnosis and repair operation of each.

**ATF 346 Ford Transmission & Transaxle Credits: 4**

Course description: This is the study of Ford automatic transmissions and transaxles to including design, operation, diagnosis and repair.

**ATF 350 Technical Internship IV\* Credits: 3**

Course description: Work experience at a participating dealership. Tasks will be consistent with the technician's ability and previous course work.

**ATF 352 Ford Systems/Technology Update Credits: 3**

Course description: Update on emerging and new technologies released by Ford Motor Company and the industry during the course of the ASSET program.

**ATF 362 Ford Diesel Engine Service & Operation Credit: 4**

Course description: The study of diesel engine construction, operation, diagnosis and repair in Ford vehicles. This will include oil, fuel, intake and exhaust systems.

## **RELATED COURSES:**

### **COM 703      Communication Skills\*\***

Credits: 3

Course description: Reading, writing, speaking, and listening are studied as methods of exploring and evaluating technological advances in trades and industry. Adapting communication for different audiences, evaluating industry-related literature, and basic business writing are emphasized.

### **MAT 772      Applied Math\*\***

Credits: 3

A course in elementary mathematical skills for technicians. Topics covered include fundamental operations with whole numbers, fractions, decimals, and signed numbers; percents; geometric figures and basic constructions; area and volume formulas; English/metric systems; measurements; and the interpretation of graphs and charts.

### **PHY 710      Technical Physics\*\***

Credits: 3

A physics course for students of technology. Topics include: forces, work, energy, materials, heat, electricity, and magnetism, with a strong emphasis on practical applications.  
Prerequisite: MAT 772 or equivalent

### **MTG 145      Human Relations in Business\*\***

Credits: 3

Emphasizes the importance of the development of proper attitudes toward self, others, and organizational settings. Stresses the development of a good self image and the relationship this has to energy levels, emotions, defensiveness, verbal and nonverbal communication.

### **SPC 122      Interpersonal Communication**

An introduction to interpersonal communication theories and their application in understanding self, relationship development and conflict resolution.

\*\* These related courses meet minimum standards required for an ASSET AAS degree, but may not provide college transfer credit. If transfer courses are desired, please see the ASSET Program Chairperson to take substitute courses.



## DMACC ASSET PROGRAM Required Tool and Supply List

*These tools should be of professional quality and should meet the standards of the automotive industry. It is suggested that students insure their tools. DMACC does not insure student tools.*

1. Tool box (suitable to house the following tools - a roller cabinet is suggested.)
2. 1/2" drive socket/ratchet set to include:
  - 12mm thru 36mm metric sockets
  - breaker bar
  - extensionsOptional; 7/16 thru 1 1/8 Standard socket set
3. 3/8" drive socket/ratchet set to include:
  - 1/4" thru 3/4" Standard sockets – short or medium length
  - 8mm thru 24mm metric sockets – shallow and deep
  - 9/16" and 5/8" deep plug sockets
  - 5/8" and 13/16" spark plug socket
  - Extensions
  - Universal joint
4. 1/4" drive socket/ratchet set to include:
  - 4 mm thru 15mm metric sockets – shallow and deep
  - Nut driver handle
  - Extensions
  - Universal joint
5. Wrenches to include:
  - 1/4" thru 1 1/8" combination, SAE
  - 7mm thru 24mm combination, metric
  - 3/8" thru 5/8" line, SAE
  - 10mm thru 18mm line, metric
  - Ratcheting wrenches 8mm thru 21mm
6. Standard and Phillips screwdriver set
7. 3 piece Pry bar set
8. Torx bits/drivers set to include the minimum of:
  - T8 thru T60 drive torx bits
  - T8 thru T30 screwdriver
9. Chisel & punch set to include 8" brass drift punch
10. Pliers to include:
  - 7" to 8" needle nose
  - 9 1/4" water pump (slip joint)
  - 7" to 8" diagonal
  - 10" locking pliers
  - 7 1/4" pliers
11. Snap ring locking pliers
  - 10" length opens to 1 1/4"
  - inside and outside True Arc
12. Hammers:
  - Dead blow – minimum 16 oz., recommend 24oz.
  - Ball peen 16 oz. & 32 oz.
  - Soft headed hammer
13. Tire pressure gauge, 0 – 100psi, digital **Quality**

Tire tread depth gauge, 1/32" increments  
Valve core remover – dual, small - large

14. Brake tools:
  - Brake retainer washer tool, large and small cup
  - Disc Brake caliper depressor
  - Optional; Brake adjusting tool - 8", Brake spring pliers
15. Hex socket set
  - 1/16" thru 3/8" hex
  - 1.5mm thru 10mm
16. Feeler gauge
  - .0015 - .080"
17. Spark plug gap gauge
  - .035" - .080"
18. 1 1/2" x 3 3/8" heavy duty gasket scraper
19. Plastic scraper
20. 6" wire stripper/crimping tool, 10 to 20 gauge
21. 12 volt test light
22. Blow gun
23. Air chuck
24. 6" pocket steel ruler REMOVE
25. Hacksaw frame with blades listed below - Optional
  - 4 - 18TPI blades
  - 4 - 24TPI blades
26. 10" Flat hand file with handle
27. Flash light with batteries
28. Oil filter wrenches (should fit small and large filters) Claw / sockets
29. Universal terminal release tool (pick set)
30. Plastic thread pitch gauge, Standard and metric ??????? metal
31. Quick disconnect tools
32. Magnetic pick up tool
33. Inspection mirror
34. 12 foot steel measuring tape - optional
35. Safety glasses (not goggles)
36. Magnetic parts tray
37. Torque wrench capable of 150 ft lb
38. DVOM (Digital Volt Ohm Meter)

***Optional tools***

0" to 6" Digital caliper, Torque Sticks, Impact, Dial Indicator

**DES MOINES AREA COMMUNITY COLLEGE  
FORD ASSET PROGRAM**

**Contact Persons**

Al Pieper  
Chairperson  
Ford ASSET Program  
1100 7<sup>th</sup> Street, Building 4 (Betts Building)  
Des Moines, IA 50310  
(515) 697-7784  
[aepieper@dmacc.edu](mailto:aepieper@dmacc.edu)

Corey Trader  
Academic Advisor  
[catrader@dmacc.edu](mailto:catrader@dmacc.edu)  
515-697-7763

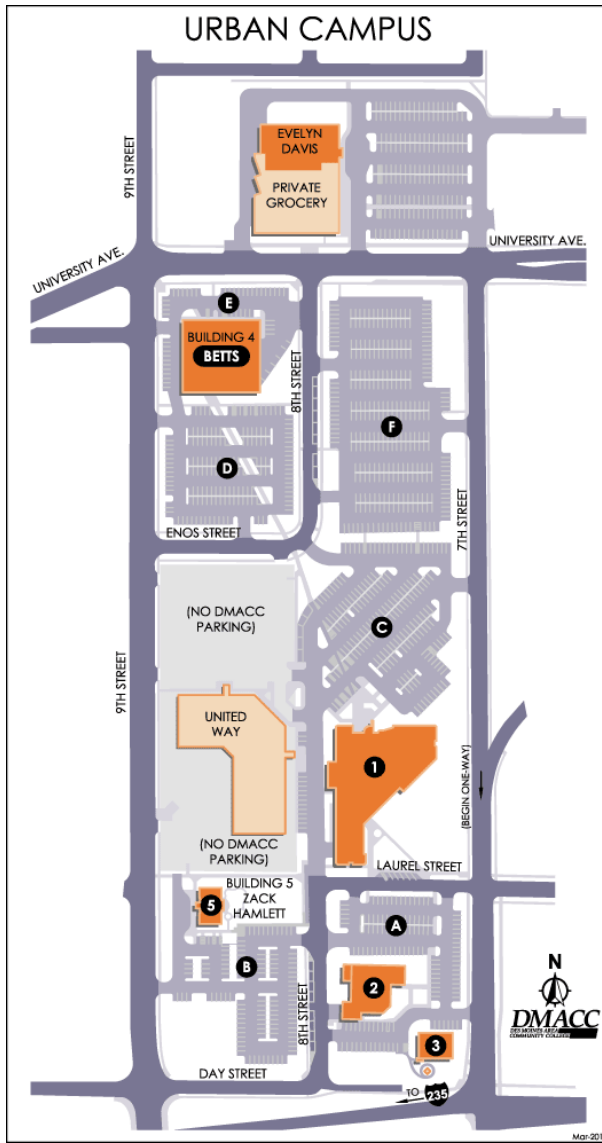
Janelle Seward  
Pathway Navigator  
515-965-6024  
[jseward@dmacc.edu](mailto:jseward@dmacc.edu)

**Primary ASSET information contact is Al Pieper**

## APPLICATION PROCEDURES AND CHECK LIST

These are the procedures an applicant must successfully complete to become accepted as a ASSET student. Check off each step when completed. Act promptly! Although the classes will not begin until fall semester, we expect all seats to be filled quickly.

- \_\_\_\_\_ 1. Complete a DMACC **Application for Admissions** and return it to the Admissions Office. This form is available from the admissions office at any DMACC campus, or online at [www.dmacc.edu](http://www.dmacc.edu).
  
- \_\_\_\_\_ 2. All prospective ASSET candidates must successfully complete the pre-acceptance tests (Alex and Accuplacer or ACT) before they can be accepted into the ASSET program. Please call the Assessment Center at the Urban Campus at (515) 248-7218 to check hours of operation. Testing is done on a walk in basis.
  
- \_\_\_\_\_ 3. Once you've completed the pre-acceptance tests, schedule a personal interview with the ASSET Program Chairperson, or faculty member. Call (515) 697-7784 to schedule this interview. At the interview, you will go over your test scores, program requirements, the Candidate Information Form, internship forms, and your goals as an ASSET student at DMACC and in a Ford / Lincoln dealership.
  
- \_\_\_\_\_ 4. Schedule an appointment for an interview with a dealer or service manager in a participating Ford/Lincoln dealership. Take the Candidate Sponsorship Agreement Form to your interview. **It is the student's responsibility to locate his/her own employer, and you must be sponsored by a Ford/Lincoln dealership to be in the ASSET program.** Students experiencing difficulty in locating an employer should contact the ASSET Program Chairperson.
  
- \_\_\_\_\_ 5. After a dealer agrees to sponsor you, return the completed Employment Agreement Form to the ASSET Program Chairperson.
  
- \_\_\_\_\_ 6. Students will receive a letter of acceptance to the college after all pre-acceptance requirements are complete. You will then be notified as to the date of Orientation/Registration for classes.



Direction to the Urban Campus.

Proceed on I-235 (From East or West) to **Exit 8A**, Downtown Des Moines/Iowa Events Center Exit.

Continue along the ramp to **6th Ave.**,  
Turn North onto **6th Ave.**

Go one block then turn left (West) onto **Laurel St.**  
**Or**, Continue on **6th** to University, turn left (West) on University to **7th St**, turn left (South) on **7th**.

The ASSET program is in Building 4 - Betts Building.

Urban Campus Address is;

1100 7th Street  
Des Moines, IA 50310