

**Career Technical Credit Transfer (CT<sup>2</sup>)  
Automotive Technologies Consensus Support Report  
November 28, 2006**

**Introduction:**

Amended Substitute H.B. 66 directed the Ohio Board of Regents to work collaboratively with the Ohio Department of Education's Office of Career-Technical and Adult Education (CTAE), public adult and secondary career technical education and state-supported institutions of higher education to establish criteria, policies, and procedures by April 15, 2007, to transfer agreed-upon technical courses from one system to another.

The intent of H.B. 66 enables students to take equivalent technical courses anywhere within the public educational system and transfer technical credits without unnecessary duplication or institutional barriers. Technical courses identified as equivalent will adhere to recognized industry standards and reflect agreed-upon knowledge and skills.

**Recognized Industry Standard - NATEF:**

In 1983, the National Automotive Technicians Education Foundation (NATEF) was founded as an independent, non-profit organization. Their mission is to evaluate technician training programs against standards developed by the automotive industry and recommend qualifying programs for certification (accreditation) by the National Institute for Automotive Service Excellence (ASE).

Per the NATEF website ([www.natef.org](http://www.natef.org)), the NATEF process has resulted in certified automotive programs in all fifty states at the secondary and post-secondary levels. Ohio has over ninety (90) ASE accredited programs.

**Ohio Automotive Technologies Collaboration:**

Ohio has a long and productive history of secondary, adult, and higher education automotive technologies faculty participating in common NATEF professional development, cooperating in industry competitions and training, and supporting Skills-USA student organization activities. With a few exceptions, all secondary, adult, and higher education automotive technologies programs are held accountable to the same national NATEF standards.

Historically, the Ohio Department of Education (ODE) has developed technical content resources to define the curriculum of state approved secondary and adult workforce development (technical) programs. When College Tech Prep was initiated in the 1990's, Technical Competency Profiles (TCPs) were jointly developed by the Ohio Board of Regents (OBR) and ODE with support by business and industry, high school, and college representatives. For automotive programs, the NATEF standards formed the foundation of this significant state level curriculum effort.

Through multiple local and some state articulation agreements, and as advanced by College Tech Prep, Ohio institutions have demonstrated a long-standing commitment to establishing automotive technologies pathways to higher education. Again, having common NATEF standards established the mechanism for articulation agreement development and implementation.

**Equivalent Content Process:**

In support of H.B. 66 and in an effort to formalize a state-wide guarantee enabling progression to higher education, thirteen secondary and postsecondary automotive technologies faculty members

(some with adult workforce program experience) were impaneled to make recommendations for equivalent content. See the attached panel list.

On October 27 and November 17, 2006, faculty panel meetings were lead by co-chairs Tracy Campbell from Owens Community College and Bert Stephens from Mahoning County Career Technology Center. The process was supported by Mike Cowles from the Ohio Department of Education and Vicki L. Melvin from the Ohio Board of Regents. The two panel meetings focused on the following:

To develop an understanding of automotive technology programs taught by secondary, adult, and higher education panel members.

To further knowledge of the House Bill 66 mandate and the activities underway to implement articulation and transfer.

To examine the recognized automotive industry standards (NATEF) in relation to articulation opportunities.

To examine the recognized automotive industry end of program assessments (NATEF and Automotive Youth Educational Systems – AYES) and ASE certifications in relation to articulation opportunities.

To reach consensus on automotive technologies learning outcomes, assessments, number of credits, and any other items related to guaranteed articulation and transfer.

Since the only recognized industry standard for automotive programs is NATEF and that foundation mandates the areas of instruction, required core content, and amount of instructional time, equivalent learning outcomes were defined as the national NATEF standards. In addition to examining the national assessments that align with the NATEF standards, current articulation agreements were reviewed by the faculty panel.

### **Higher Education Pathways:**

Secondary and adult automotive technologies students entering higher education typically seek an Associate of Applied Science focusing on automotive technology or automotive service management. However, a number of other options are available including higher education courses supporting ASE certifications or an Associate of Technical Studies for those seeking customized higher education in the automotive technologies area.

Students progressing to advanced degrees may choose to enter the engineering or business fields of study. Although neighboring states have baccalaureate degrees in the automotive field, Ohio does not offer this pathway option.

### **Consensus Agreement Recommendations:**

In support of H.B. 66 and in an effort to improve mobility of students throughout the state and to improve access to higher education, the Automotive Technologies Faculty Panel has reached consensus agreement on three (3) areas pertinent to industry standards and learning outcomes. In addition, the Faculty Panel reached consensus agreement on five (5) additional recommendations related to documentation of student learning and guaranteed credit.

#### **Recommendations for Industry Standards and Learning Outcomes**

1. Recognize NATEF as the recognized industry standard for automotive technologies.

2. Recommend, as CT<sup>2</sup> learning outcomes, NATEF's core areas of brakes, electrical/electronic systems, engine performance, and suspension and steering. See attached list of learning outcomes.
3. Require NATEF program certification (accreditation) in articulated core areas.

#### Recommendations for Documentation of Learning and Guaranteed Credit

1. Require passage of the NATEF/AYES end of program assessment or the Automotive Service Excellence (ASE) certification assessment at the cut score established by the industry association.
2. Require documentation of student learning and performance by 1.) faculty sign-off by NATEF core area and 2.) industry assessment certificate (NATEF/AYES end-of-program or ASE certification).
3. Provide CT<sup>2</sup> guaranteed credit at no less than the minimum of three quarter/two semester hours per NATEF core areas of brakes, electrical/electronic systems, engine performance, and suspension and steering.
4. Provide CT<sup>2</sup> guaranteed credit on postsecondary transcripts after enrollment and successful completion of quarter/semester coursework.
5. Consider no more than two years as the maximum time to access CT<sup>2</sup> guaranteed credit.

#### **Current Status:**

On November 28, 2006, the draft CT<sup>2</sup> Automotive Technologies Consensus Support Report was emailed to the faculty panel for review and comment. On December 7, 2006, the recommendations were presented to the CT<sup>2</sup> Advisory Committee, which supported the move to step two in the development process. The next step, step two, entails educational partners reviewing the learning outcomes. If it is determined that the learning outcomes need modification, the Faculty Panel will reconvene.

Attachments: Faculty Panel  
Learning Outcomes (NATEF Core)

#### **Career Technical Credit Transfer (CT<sup>2</sup>) Articulation Faculty Panel Automotive Technology**

Tracy Campbell (co-chair)  
Owens Community College  
PO Box 10,000

Toledo, OH 43699-1947  
567-661-7836  
[Tracy\\_campbell@owens.edu](mailto:Tracy_campbell@owens.edu)

Robert Stephens (co-chair)  
Mahoning County Career & Technical  
Center  
7300 Palmyra Road  
Canfield, OH 44406  
330-729-4000  
[mjvs\\_rs@access-k12.org](mailto:mjvs_rs@access-k12.org)

Randy Bennett  
Stark State College  
5600 Whipple Ave  
Canton, OH 44720  
330-494-6170, ext 4475  
[rbennett@starkstate.edu](mailto:rbennett@starkstate.edu)

Jim Boorn  
C-TEC  
150 Price Road  
Newark, OH 43055  
740-366-3351  
[jboorn@c-tec.edu](mailto:jboorn@c-tec.edu)

Michael Francis  
Owens Community College  
P.O. Box 10,000  
Toledo, OH 43699-1947  
567-661-7397  
[Michael\\_francis@owens.edu](mailto:Michael_francis@owens.edu)

David Gillies  
Trumbull Career & Technical Center  
528 Educational Highway  
Warren, OH 44483  
330-847-0503  
[dave.gillies@neomin.org](mailto:dave.gillies@neomin.org)

John Hatton  
Cincinnati State Technical & Community  
College  
3520 Central Parkway  
Cincinnati, OH 45223  
513-569-1636  
[john.hatton@cincinnatiastate.edu](mailto:john.hatton@cincinnatiastate.edu)

Bob Joseph  
Akron East High School  
80 Britain Road  
Akron, OH 44305  
330-794-4100, ext 235  
[rjoseph@akron.k12.oh.us](mailto:rjoseph@akron.k12.oh.us)

Rex Kent  
Sinclair Community College  
444 W. 3<sup>rd</sup> Street

Dayton, OH 45402  
937-512-3169  
[rex.kent@sinclair.edu](mailto:rex.kent@sinclair.edu)

Mark McKinney  
Delaware Area Career Center  
1610 State Route 521  
Delaware, OH 43015  
740-363-1993, ext 2236  
[mckinneym@delawareareacc.org](mailto:mckinneym@delawareareacc.org)

Dannie Queen  
Washington State Community College  
710 Colegate Dr  
Marietta, OH 45750  
740-374-8716  
[dqueen@wscc.edu](mailto:dqueen@wscc.edu)

Andy Rezin  
Columbus State Community College  
550 E. Spring Street  
Columbus, OH 43216  
614-287-5303  
[arezin@csc.edu](mailto:arezin@csc.edu)

Lyle Taylor  
U.S. Grant Career Center  
718 West Plane Street  
Bethel, OH 45106  
513-734-6222, ext 3207  
[ltaylor@grantcareer.com](mailto:ltaylor@grantcareer.com)

Consultants  
Mike Cowles, Ohio Department of  
Education  
[mike.cowles@ode.state.oh.us](mailto:mike.cowles@ode.state.oh.us)

Vicki Melvin, Ohio Board of Regents  
[vmelvin@regents.state.oh.us](mailto:vmelvin@regents.state.oh.us)