

## Connecting High School to College and Career

Career and Technical Education (CTE) provides critical learning and hands-on skills through Career Pathways within eight Areas of Study. Students who focus on a Pathway acquire the skills necessary for entry into well-paid careers with high potential for rapid financial growth, increased levels of responsibility, and a high degree of personal satisfaction.

### CTE Pathways:

- Will jump-start your future career.
- Will give you unlimited opportunities.
- Will help you plan for life after high school—before graduation.
- Will save you time and money.

### What is a Pathway?

- A Pathway is a sequence of courses within your area of interest.
- A Pathway will connect your career interests from high school to college and/or career.
- A Pathway will help you acquire the depth of knowledge and skill linked with specific post-secondary programs that will lead to a certificate or degree and/or career.

### CTE: Keeping it REAL

- Classroom instruction connects to the REAL world of work and future career opportunities.
- Statistics indicate that CTE graduates are worth higher wages because they are more productive than other workers.

### Did you know?

Ninety percent of jobs require training beyond high school.

### Top 5 reasons to participate in CTE Career Pathways:

1. To acquire technical skills training.
2. To participate in hands-on learning.
3. To jump-start your future career.
4. To earn college credit while in high school through concurrent enrollment classes.
5. To save time and money!

### Ask yourself:

- What do I want to be doing in 5 years?
- What do I want to be doing in 10 years?

### Ask yourself:

- What classes should I take to get ready for college?
- What does it cost to go to college?

### Ask yourself:

- Why should I take this class?
- Why should I plan?
- Why should I study?
- Why should I graduate from high school?

### Ask yourself:

- How can Pathways help me?
- How do I find the options that are right for me?
- How do I find a satisfying career?

*Acquiring critical learning and hands-on skills through education and training will open doors of opportunity for obtaining employment within your area of interest. Stay in school and finish your education. Your future depends on it.*

For more information log onto  
[www.UtahCTE.org](http://www.UtahCTE.org).

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Salt Lake City, UT 84114-4200  
Larry K. Shumway, Ed.D., State Superintendent of Public Instruction  
Mary Shumway, State Director of Career and Technical Education



Skilled and Technical Sciences  
Education  
*Heavy Duty Diesel*

## High School to College and Career PATHWAYS



CAREER AND TECHNICAL EDUCATION  
*Giving Students the Edge*



# High School to College and Career Pathway: Secondary

Area of Study: Skilled & Technical Sciences Education



## Pathway: Mechanics & Repairs Heavy Duty Diesel

Middle School		State Requirements			High School Suggested Education Plan				College & Careers																																									
7 <sup>th</sup> Grade	8 <sup>th</sup> Grade	Middle School	High School	9 <sup>th</sup> Grade Suggested	10 <sup>th</sup> Grade Suggested	11 <sup>th</sup> Grade Suggested	12 <sup>th</sup> Grade Suggested	Beyond High School																																										
Language Arts 7 1.00	Language Arts 8 1.00	2.00	Language Arts 4.00	Language Arts 9 1.00	Language Arts 10 1.00	Language Arts 11 1.00	Language Arts 12 1.00	<p>There are a number of options for education and training beyond high school, depending on your career goals.</p> <ul style="list-style-type: none"> <li>&gt; Certificate</li> <li>&gt; Associate degree</li> <li>&gt; Bachelor's degree</li> <li>&gt; Professional degree</li> <li>&gt; On-the-job training</li> <li>&gt; Apprenticeship</li> <li>&gt; Military training</li> </ul> <p><b>Heavy Duty Diesel is:</b></p> <ul style="list-style-type: none"> <li>&gt; High skill</li> <li>&gt; High wage</li> <li>&gt; High demand</li> <li>&gt; Nontraditional for females</li> </ul> <p><b>Sample Occupations</b></p> <ul style="list-style-type: none"> <li>&gt; Diesel Engine Specialist</li> <li>&gt; Heavy Duty Diesel Teacher</li> <li>&gt; Mechanics and Repairer Helper</li> </ul> <p>For more information on salary projections, labor market demand, and training options, visit <a href="http://www.utahfutures.org">www.utahfutures.org</a>.</p>																																										
Pre-Algebra 1.00	Elem. Algebra or Applied Math 1.00	2.00	Math 3.00	Geometry or Applied Math II 1.00	Intermediate Algebra 1.00	Additional credit 1.00																																												
Science .50	Science 1.00	1.50	Science 3.00	Earth Systems 1.00	Physics 1.00 or Physics with Technology 1.00	Additional credit 1.00																																												
Utah Studies .50	U.S. History I 1.00	1.50	Social Studies 2.50	Geography for Life .50	World Civilizations .50	U.S. History II 1.00	U.S. Government and Citizenship .50																																											
P.E. 1.00	Health .50	1.50	P.E./Health 2.00	Participation Skills and Techniques .50	Fitness for Life .50 / Health Education .50 Lifetime Activities or Sport .50																																													
The Arts .50	The Arts .50	1.00	Fine Arts 1.50	Fine Arts Courses 1.50																																														
			Financial Literacy .50			Financial Literacy .50																																												
Keyboarding .50			Computer Tech. .50	Computer Technology .50																																														
CTE Intro 1.00		1.00	Career and Technical Education 1.00	<p><b>Career and Technical Education Recommended Pathway Courses</b></p> <p>(Students may select individual courses for exploration, or a complete Pathway for an in-depth focus.)</p> <p><b>CLASS AVAILABILITY MAY VARY AT YOUR HIGH SCHOOL</b></p> <table border="1"> <thead> <tr> <th>Course #</th> <th>Foundation Course: (required)</th> <th>Credit</th> </tr> </thead> <tbody> <tr> <td>47.0605</td> <td>Diesel Technician*</td> <td>1.00</td> </tr> <tr> <td>47.0613</td> <td>Medium/Heavy Vehicle Systems</td> <td>1.00</td> </tr> <tr> <td colspan="3"><b>Elective Courses:</b></td> </tr> <tr> <td>47.0105</td> <td>Basic Electronics</td> <td>.50</td> </tr> <tr> <td>47.0604</td> <td>Introduction to Automotive</td> <td>1.00</td> </tr> <tr> <td>47.0606</td> <td>Small Vehicle Technician</td> <td>1.00</td> </tr> <tr> <td>47.0612</td> <td>Vehicle Inspection Technician</td> <td>1.00</td> </tr> <tr> <td>47.0624</td> <td>ASE General Service Technician</td> <td>1.00</td> </tr> <tr> <td>47.0634</td> <td>ASE Brakes</td> <td>1.00</td> </tr> <tr> <td>47.0644</td> <td>ASE Steering and Suspension</td> <td>1.00</td> </tr> <tr> <td>47.0654</td> <td>ASE Electrical/Electronics</td> <td>1.00</td> </tr> <tr> <td>47.0664</td> <td>ASE Engine Performance</td> <td>1.00</td> </tr> <tr> <td>32.0199</td> <td>Student Internship (Critical Workplace Skills)</td> <td>.50</td> </tr> </tbody> </table> <p>* Will include advanced Diesel courses.</p> <p>Many Utah post-secondary programs accept high school courses toward a two- or four-year degree through concurrent enrollment. Check regional post-secondary Pathways for details.</p>					Course #	Foundation Course: (required)	Credit	47.0605	Diesel Technician*	1.00	47.0613	Medium/Heavy Vehicle Systems	1.00	<b>Elective Courses:</b>			47.0105	Basic Electronics	.50	47.0604	Introduction to Automotive	1.00	47.0606	Small Vehicle Technician	1.00	47.0612	Vehicle Inspection Technician	1.00	47.0624	ASE General Service Technician	1.00	47.0634	ASE Brakes	1.00	47.0644	ASE Steering and Suspension	1.00	47.0654	ASE Electrical/Electronics	1.00	47.0664	ASE Engine Performance	1.00	32.0199	Student Internship (Critical Workplace Skills)	.50
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<b>Workforce Trends</b> Employment growth will result from the increased manufacturing of buses and trucks powered by durable, economical diesel engines. Opportunities are good for those with formal diesel mechanic training and experience with electronic and diagnostic equipment.		Core Curriculum and elective requirements may vary district to district. Check with your school counselor.  Concurrent enrollment course offerings vary by school and district.																																																
<b>Get the Facts</b> In 2006, the Environmental Protection Agency (EPA) imposed stricter emissions standards for diesel trucks. This regulation is designed to reduce diesel truck emissions by 90%.		This is a nontraditional occupation for women. In 2007, 5.3 percent of the people employed in this occupation were women.																																																

**Note:** For more information, talk to your school counselor.