DELAWARE COUNTY TECHNICAL SCHOOLS

# SKILL ALIGNMENT CHARTS

## 2022-2023 School Year

DCIU
Empowering Partnerships For Education

DELAWARE COUNTY
DCTS
TECHNICAL HIGH SCHOOLS

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**Delaware County Technical High Schools**
*Skill Alignment Chart for:* Advertising Design & Commercial Art
**CIP Code: 50.0402**

DELAWARE COUNTY
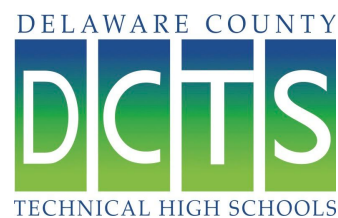DCTS
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| Educational & Physical Attributes and Program Requirements | Recommended for Success |
|---|---|
| **Program Description** | This program introduces students to the creative design industry. In a world where commercial art has never been more relevant, DCTS Advertising Design and Commercial Art offers students a community in which to develop the conceptual foundation and skills needed for admission to a post- secondary institution to refine their skills. Students learn the fundamentals to finish each project at an entry level. They are introduced to the relevant applications of the Adobe Creative Suite and explore mediums such as print design, electronic design, drawing and illustration.<br><br>Students learn the fundamentals to finish each project at a beginner level. They explore graphic design, advertising, print design, illustration, digital photography, and game art & design. Students gain an exceptional amount of knowledge and understanding of creative software such as Adobe Photoshop, Illustrator and InDesign. Please visit the program web page at https://www.dciu.org/Page/3309 |
| **Program Safety & Physical/Environmental Considerations** | Excellent Hand/Eye coordination<br>Drawing ability and color keenness<br>Stamina (ability to focus at work station for long periods of time) |
| **Essential skills** | College prep classes<br>Clerical perception<br>Color discrimination<br>Finger dexterity<br>Academic skills<br>Art skills |
| **Grading Scale** | Knowledge (texts, quizzes, projects, assignments) 40%<br>Skills (Program of Study Competency Task List) 40%<br>Work Ethic (Professional Expectations, Employability Skills) 20% |
| **Grade Level of Textbook:**<br><br>**Reading & Language Arts Requirements** | Flesch-Kincaid Grade Level 10.1 (sample text)<br><br>Read grade level text independently and proficiently<br>Identify the main idea(s) of a text<br>Analyze how an author's ideas or claims are developed in a text/ad<br>Analyze how words and phrases shape meaning and tone<br>Use academic words and phrases correctly<br>Determine and clarify the meaning of new words<br>Write short and long selections with a distinct focus<br>Develop a main idea or topic with specific details<br>Organize ideas, concepts, and information within writing selections<br>Identify and use various persuasive techniques when creating ads<br>Conduct short and extended research projects |

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| | Use grade-appropriate grammar, capitalization, punctuation, and spelling in ads and designs |
| **Math Requirements** | Sample Mathematics<br>Add, subtract, multiply, and divide whole numbers, fractions and decimals<br>Convert between fractions, decimals, and percent<br>Solve ratio and proportion problems for page proportions<br>For Computer Page Layout- determine spacing in type composition, calculate margins, and create tabs, columns, and tables<br>Determine paper stock size, thickness, and weight<br>Identify and convert measurement- standard, picas, and pixels (1 inch = 6 picas = 72 pixels)<br>Analyze relationships between two-dimensional and three-dimensional objects<br>Calculate perimeter and area of polygons<br>Calculate estimates for jobs |
| **Science Requirements** | No Science Requirements |
| **Theory Time** | 40% |
| **Lab Time** | 60% |
| **Career Portfolio Requirements** | Career Objective Video<br>Career Research Essay<br>Education Research Graphic Organizer<br>Resume, Cover Letter, Interview Practice, Post Interview Thank You Email<br>The Responsible Employee - Scenarios<br>Resolving Workplace Conflicts - Scenarios<br>Interview an Expert Summary<br>Defining Entrepreneurship Response |
| **Homework** | OSHA 10 completion; review |
| **Assessments** | List Mandatory and other assessments including<br>Math Assessment<br>Literacy Assessment<br>Quarterly Assessment<br>Quizzes (# per marking period)<br>NOCTI (mandatory for all CTC programs) |
| **Industry Certifications** | OSHA 10 Industry Certification<br>Employability: Interviewing Skills |
| **Study & Other Skills** | Good attendance<br>Ability to work independently<br>Work in small groups<br>Ability to access computer based learning resources<br>Basic knowledge of utilizing Google products |
| **Dual Enrollment Opportunities** | Widener University - Gen Ed courses |
| **Articulation Agreements** | **SOAR Credits**<br>Community College of Allegheny County and Harcum College<br>**Articulation Agreements**<br>Harrisburg University of Science and Technology, Neumann University, Pittsburgh Technical College, and Saint Francis University. |

**Delaware County Technical High Schools**
*Skill Alignment Chart for:* Advertising Design & Commercial Art
**CIP Code: 50.0402**

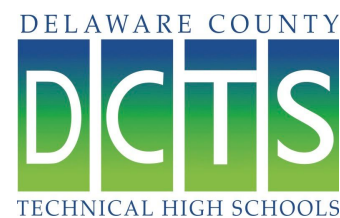| | |
|---|---|
| **Uniform and other costs** | Program Shirts - @ $28.00<br>4GB+USB Flash Drive - $21.95<br>Sketchbook (50-100pgs) - $6.95<br>Gmail Account - Free<br>24 x 36 Newsprint Pad - $21.53<br>Drawing Pencil Set (with all of the different pencil weights) - $14.99<br>Adobe Creative Suite - recommended |
| **Career Pathways** | **Median Wage for Related Occupations:**<br><br>Multimedia - $70,000<br>Commercial & Industrial Designer - $75,650<br>Graphic Designer - $51,730<br>Desktop Publisher - $51,090 |
| **Transition Activities Completed in Program - Can be added to Transition Plan** | Opportunity to complete a career portfolio in compliance with the PA Future Ready Index and Career Readiness Standards<br>Opportunity to complete the competency task list for the Advertising Design & Commercial Art Program<br>Opportunity to Interview an expert in the Advertising Design & Commercial Art field<br>Opportunity to earn a safety certification<br>Opportunity to participate in college and career presentations |

**Delaware County Technical High Schools**
*Skill Alignment Chart for:* Automotive Technology
**CIP Code: 47.0604**

| Educational & Physical Attributes and Program Requirements | Recommended for Success |
|---|---|
| **Program Description** | Automotive Technology is a recognized NATEF/ASE accredited instructional program that emphasizes skills to diagnose, service and maintain all types of automobiles. Upon graduation and following one year of employment in the field, students are eligible to take the automotive NATEF/ASE exam. Successful graduates of this program are qualified to enter the automotive field as entry-level service technicians in new car dealerships or related automotive businesses. When students start in the program, they are introduced to topics such as brakes, steering and suspension, electrical, and engine performance. If students believe a smooth-running engine is a beautiful sound, and want to keep cars running that way while using the most up-to-date tools and equipment, that student is in the right place! To be successful, students should be ready to work with constantly changing technology. They have the opportunity to put that knowledge to use with their hands in a timely manner to repair vehicles Please visit the program webpage at https://www.dciu.org/Page/3311 |
| **Program Safety & Physical/Environmental Considerations** | A focus on safety around moving equipment, hand tools, power tools and other equipment found in the industry<br>Ability to diagnose the source of a problem quickly and accurately<br>Ability to work in tight spaces<br>Ability to work independently, read and follow directions<br>Good eye/hand coordination<br>Stamina to stand for long periods of tim |
| **Essential skills** | Finger dexterity, Manual dexterity<br>Motor coordination<br>Critical Thinking<br>Complex problem solving<br>Troubleshooting<br>Spatial/visual thinking<br>Good speaking skills<br>Ability to work collaboratively with others |
| **Grading Scale** | Knowledge (texts, quizzes, projects, assignments) 40%<br>Skills (Program of Study Competency Task List) 40%<br>Work Ethic (Professional Expectations, Employability Skills) 20% |
| **Grade Level of Textbook**<br><br>**Reading & Language Arts Requirements** | Flesch-Kincaid Grade  Level 10.8 (sample text)<br><br>Read grade level text independently and proficiently<br>Identify the main idea(s) of a text<br>Use academic words and phrases correctly<br>Determine and clarify the meaning of new words<br>Write short and long selections with a distinct focus<br>Develop a main idea or topic with specific details |

**Delaware County Technical High Schools**
*Skill Alignment Chart for:* Automotive Technology
CIP Code: 47.0604

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|---|---|
| | Organize ideas, concepts, and information within writing selections<br>Conduct short and extended research projects<br>Use grade-appropriate grammar, capitalization, punctuation, and spelling<br>Participate effectively in collaborative discussions<br>Present information, findings, and supporting evidence clearly in repair/service reports |
| **Math Requirements** | Mathematics Sample<br>Adding, subtracting, multiplying, and dividing whole numbers, fractions and decimals<br>Measuring in the metric and English systems<br>Using and manipulating formulas<br>Using conversion factors<br>Working with angular measurements in degrees<br>Determining if measurements are within tolerances<br>Extracting data from tables and using appropriately<br>Using and reading various measuring devices accurately |
| **Science Requirements** | Physical Science<br>Chemistry<br>Environmental Science |
| **Theory Time** | 30% |
| **Lab Time** | 70% |
| **Career Portfolio Requirements** | Career Objective Video<br>Career Research Essay<br>Education Research Graphic Organizer<br>Resume, Cover Letter, Interview Practice, Post Interview Thank You Email<br>The Responsible Employee - Scenarios<br>Resolving Workplace Conflicts - Scenarios<br>Interview an Expert Summary<br>Defining Entrepreneurship Response |
| **Homework** | Study for tests and quizzes, completion of projects and missed assignments, OSHA safety training |
| **Assessments** | List Mandatory and other assessments including<br>Math Assessment<br>Literacy Assessment<br>Weekly Quizzes<br>Unit Tests<br>Quarterly Assessments<br>Projects<br>NOCTI (mandatory for all CTC programs) |
| **Industry Certifications** | OSHA 10<br>Employability: Interviewing Skills<br>ICAR Greenlink: Safety & Pollution Prevention (SP/2)<br>Prepare for Automotive Service Excellence (ASE) - Upon graduation and working in the Automotive field for one year. |
| **Study & Other Skills** | note taking skills<br>Attendance |

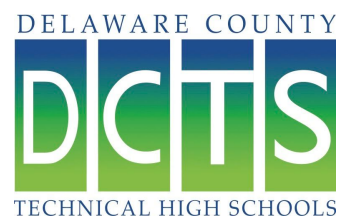| | |
|---|---|
| | Ability to access online resources such as Google Classroom and online textbooks |
| **Dual Enrollment Opportunities** | Delaware County Community College<br>Widener University - General Education Courses |
| **Articulation Agreements** | **Soar College Credits:**<br>Harrisburg Area Community College-Harrisburg, Community College of Allegheny County, Delaware County Community College, Luzerne County Community College, Northampton County Area Community College, Community College of Philadelphia, Thaddeus Stevens College of Technology, Pennsylvania College of Technology, Allegany College of Maryland, Johnson College, Commonwealth Technical Institute and Rosedale Technical College<br>**Articulation Agreements:**<br>Automotive Training Center, University of Northwestern Ohio, Northampton Community College and Saint Francis University. |
| **Uniform and other costs** | Program shirts - @ 52.00<br>Need work books<br>Work pants |
| **Career Pathways** | **Median Wage for Related Occupations:**<br>Electronic Equipment Installers & Repairers, Motor Vehicles $39,150<br>Automotive Service Technicians & Mechanics $41,800<br>Automotive Product Specialists $40,000<br>Supervisor, Mechanics $67,340 |
| **Transition Activities Completed in Program - Can be added to Transition Plan** | Opportunity to complete a career portfolio in compliance with the PA Future Ready Index and Career Readiness Standards<br>Opportunity to complete the competency task list for the Automotive Technology Program<br>Opportunity to Interview a expert in the Automotive Technology Program<br>Opportunity to earn a safety certification<br>Opportunity to participate in college and career presentations |

**Delaware County Technical High Schools**
*Skill Alignment Chart for:* **Biomedical Technology and Laboratory Sciences**
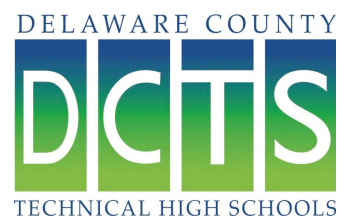**CIP Code: 51.9999**

| Educational & Physical Attributes and Program Requirements | Recommended for Success |
|---|---|
| **Program Description** | This program provides students with the opportunity to use state-of-the-art equipment to learn the principles of scientific investigation and how they apply to environmental health, forensics, genetic engineering, and medicine. Students explore the principles of biomedical science. By engaging students in dissection, experimental design, and various laboratory skills, students learn concepts of biology and medicine to determine the factors that lead to the death of a fictional program. This program utilizes the Project Lead the Way curriculum, preparing students for the foundation necessary to pursue post secondary and career opportunities in pathology, biomedical engineering, genetics, medical technology, and molecular and cellular biology. Please visit the program webpage at https://www.dciu.org/Page/3312 |
| **Program Safety & Physical/Environmental Considerations** | Emotional and mental stability (as some situations and scenarios can be hard to handle)<br>Good personal hygiene and proper attire (hair pulled back, no long nails, facial piercings, or dangling earrings/clothing)<br>Not disturbed by incidents involving bodily fluids, surgeries, injections, traumatic situations, etc...<br>Prolonged standing, bending, and stooping required<br>Ability to follow safety procedures and guidelines AT ALL TIMES |
| **Essential skills** | Social Perceptiveness<br>Strong basic science skills<br>Directional skills<br>Ability to work independently and as part of a group<br>Good attendance a MUST<br>Attention to detail extremely important<br>Basic computer and keyboarding skills<br>Demonstrate initiative, responsibility, and critical thinking skills<br>Excellent listening and independent note taking skills<br>Professionalism<br>Good math skills (using formulas for calculations; accurate measurement techniques; proper volumetric measurements) |
| **Grading Scale** | Knowledge (texts, quizzes, projects, assignments) 40%<br>Skills (Program of Study Competency Task List) 40%<br>Work Ethic (Professional Expectations, Employability Skills) 20% |
| **Grade Level of Textbook:**<br><br>**Reading & Language Arts Requirements** | Flesch-Kincaid Grade Level: 13.1 (sample text)<br><br>Read grade level text independently and proficiently<br>Identify the main idea(s) of a text<br>Analyze how an author's ideas or claims are developed in a text<br>Cite thorough textual evidence to support the analysis of a text<br>Analyze, interpret, and evaluate the series of ideas or events in a text<br>Analyze how words and phrases shape meaning and tone<br>Use academic words and phrases correctly<br>Determine and clarify the meaning of new words |

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|  | Write short and long selections with a distinct focus<br>Develop a main idea or topic with specific details<br>Organize ideas, concepts, and information within writing selections<br>Conduct short and extended research projects, including labs<br>Use grade-appropriate grammar, capitalization, punctuation, and spelling<br>Participate effectively in collaborative discussions<br>Present information, findings, and supporting evidence clearly in lab reports |
| **Math Requirements** | Sample Mathematics<br>Apply properties of exponents, rational and irrational numbers to solve problems<br>Manipulate formulas and equations<br>Represent, solve and interpret equations/inequalities and systems of equations/inequalities algebraically and graphically<br>Understand functions and their graphs on a coordinate plane<br>Summarize, represent, and interpret graphs and data displays<br>Recognize and evaluate random processes underlying statistical experiments<br>Analyze decisions and strategies using probability concept<br>Make inferences and justify conclusions based on sample surveys, experiments, and observational studies<br>Calculate angle measurements |
| **Science Requirements** | Strong Basic Science Skills<br>Biology |
| **Theory Time** | 50% |
| **Lab Time** | 50% |
| **Career Portfolio Requirements** | Career Objective Video<br>Career Research Essay<br>Education Research Graphic Organizer<br>Resume, Cover Letter, Interview Practice, Post Interview Thank You Email<br>The Responsible Employee - Scenarios<br>Resolving Workplace Conflicts - Scenarios<br>Interview an Expert Summary<br>Defining Entrepreneurship Response |
| **Homework** | OSHA 10, Career Portfolio, incomplete class work |
| **Assessments** | Math Assessment<br>Literacy Assessment<br>Quarterly Assessment each quarter<br>Project based learning, no paper and pencil quizzes but many data analysis assessments<br>NOCTI (mandatory for all CTC programs) |
| **Certifications** | OSHA 10<br>Employability: Interviewing Skills<br>CPR/AED<br>First Aid |
| **Study & Other Skills** | Good attendance<br>Ability to work in groups |

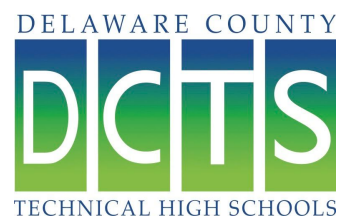| | |
|---|---|
| | Good interpersonal skills<br>Ability to read and carry out directions independently and in a group<br>Strong empathy to understand the pains and suffering of others<br>Ability to access computer based learning resources<br>Basic knowledge of Google products |
| **Dual Enrollment Opportunities** | Widener University - Gen Ed Courses |
| **Articulation Agreements** | **Soar Credits:**<br>Harrisburg Area Community College-Harrisburg, Mount Aloysius College, Harcum College, Lackawanna College, Greater Altoona Career & Technology Center, Johnson College, Lenape Technical School Practical Nursing Program, Central Pennsylvania Institute of Science and Technology, Western Area Career and Technology Center, Greater Johnstown Career and Technology Center and Crawford County Career and Technical Center Practical Nursing Program.<br>**Articulation Agreements:**<br>St. Francis University, Neumann University, Pittsburgh Technical College |
| **Uniform and other costs** | Student should expect to spend approximately $65.00 for Lab Coat and other uniform requirements<br>Other items:  Two composition books; two boxes of latex-free, powder-free gloves (size large); one pack of chalk markers; blue & black pens; a container of bleach wipes; a pkg. of colored paper; and  post-it notes |
| **College/Career Pathways** | **Median Wage for Related Occupations**<br><br>● Healthcare Technologists & Technicians, all other $43,120<br>● Healthcare Practitioners & Technical Workers, all other $82,870<br>● Healthcare support worker $38,850<br>● Nurse, Other Specialist $69,170 |
| **Transition Activities Completed in Program - Can be added to Transition Plan** | Opportunity to complete a career portfolio in compliance with the PA Future Ready Index and Career Readiness Standards<br>Opportunity to complete the competency task list for the Biomedical Technology & Laboratory Sciences Program<br>Opportunity to Interview an expert in the Biomedical field<br>Opportunity to earn a safety certification<br>Opportunity to participate in college and career presentations |

# Delaware County Technical High Schools
## *Skill Alignment Chart for:* Building Trades
### CIP Code: 46.0401

| Educational & Physical Attributes and Program Requirements | Recommended for Success |
|---|---|
| **Program Description** | This program teaches general construction skills and knowledge necessary to build a house. Practical experience and classroom training prepares students for employment in general construction or property maintenance. Students are taught carpentry, masonry, plumbing, roofing, drywall application, painting and framing/finishing. Students learn basic safety, the use of hand tools and power tools, and construction technology. Students explore floor systems, wall systems, ceiling joists, and roof joists. They also learn plumbing with copper tubing and fittings. Students learn about exterior finishes, basic stair layout, electrical safety, residential electric work, and PVC plumbing for drains, waste, and vents. Please visit the program page at https://www.dciu.org/Page/3313 |
| **Program Safety & Physical/Environmental Considerations** | Ability to lift 40 lbs<br>Ability to work in all weather conditions<br>Ability to work independently<br>No fear of heights or working on closed spaces<br>Physical strength and stamina<br>Hair pulled back<br>Safety equipment worn |
| **Essential skills** | Eye/hand/foot coordination<br>Flexibility<br>Critical thinking<br>Active listening<br>Judgement, decision making, and self control<br>Finger dexterity<br>Form perception<br>Manual dexterity<br>Spatial aptitude<br>Ability to work independently and in groups |
| **Grading Scale** | Knowledge (texts, quizzes, projects, assignments) 40%<br>Skills (Program of Study Competency Task List) 40%<br>Work Ethic (Professional Expectations, Employability Skills) 20% |
| **Grade Level of Textbook:** | Flesch-Kincaid Grade Level 11.2 (sample text) |
| **Reading & Language Arts Requirements** | Read grade level text independently and proficiently<br>Identify the main idea(s) of a text<br>Use academic words and phrases correctly<br>Determine and clarify the meaning of new words<br>Write short and long selections with a distinct focus<br>Develop a main idea or topic with specific details<br>Organize ideas, concepts, and information within writing selections<br>Conduct short and extended research projects<br>Use grade-appropriate grammar, capitalization, punctuation, and spelling |

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| | Participate effectively in collaborative discussions<br>Present information, findings, and supporting evidence clearly in service reports |
| **Math Requirements** | Sample Mathematics<br>Adding, subtracting, multiplying, and dividing whole numbers, fractions and decimals<br>Estimating quantities<br>Converting between units in English system<br>Reading and taking accurate measurements<br>Manipulation and application of fractional measurements<br>Using formulas<br>Manipulating equations.<br>Calculating perimeter, area, volume, and other quantities |
| **Science Requirements** | Physical Science |
| **Theory Time** | 30% |
| **Lab Time** | 70% |
| **Career Portfolio Requirements** | Career Objective Video<br>Career Research Essay<br>Education Research Graphic Organizer<br>Resume, Cover Letter, Interview Practice, Post Interview Thank You Email<br>The Responsible Employee - Scenarios<br>Resolving Workplace Conflicts - Scenarios<br>Interview an Expert Summary<br>Defining Entrepreneurship Response |
| **Homework** | Study for tests and quizzes, completion of projects and missed assignments, OSHA safety training |
| **Assessments** | List Mandatory and other assessments including<br>Math Assessment<br>Literacy Assessment<br>Quarterly Assessment<br>Module/Chapter Quizzes<br>Unit Tests<br>Projects<br>NOCTI (mandatory for all CTC programs) |
| **Industry Certifications** | OSHA 10<br>Employability: Interviewing Skills<br>National Center for Construction Education and Research (NCCER) Construction Technology<br>National Center for Construction Education and Research (NCCER) Core |
| **Study & Other Skills** | note taking skills<br>good attendance<br>Responsible<br>Ability to access computer based learning resources<br>Basic knowledge of Google products |

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| **Dual Enrollment Opportunities** | Widener University- Gen Ed courses |
| **Articulation Agreements** | **SOAR Credits**:<br>Community College of Allegheny County, Luzerne County Community College, Orleans Technical Institute and Commonwealth Technical Institute<br>**Articulation Agreements:**<br>St. Francis University |
| **Uniform and other costs** | Students should expect to invest approximately $200 in specialized tools, uniforms, kits and reference books for this 3-year program. |
| **Career Pathways** | **Median Wage for Related Occupations**<br>Maintenance & Repair Workers, General $41,950<br>Construction, Workers, General $40,000<br>Property Manager $62,000<br>Supervisor, Construction $69,510 |
| **Transition Activities Completed in Program - Can be added to Transition Plan** | Opportunity to complete a career portfolio in compliance with the PA Future Ready Index and Career Readiness Standards<br>Opportunity to complete the competency task list for the Building Trades Program<br>Opportunity to Interview a expert in the Building Trades Program<br>Opportunity to earn a safety certification<br>Opportunity to participate in college and career presentations |

**Delaware County Technical High Schools**
*Skill Alignment Chart for:* **Carpentry**
**CIP Code: 46.0201**

| Educational & Physical Attributes and Program Requirements | Recommended for Success |
|---|---|
| **Program Description** | This program provides students the opportunity to learn building layout, framing, roofing, window and door installation, and finish trim work. On-site projects include the use of hand and power tools to do building layout, flooring, framing and wall construction, roofing, and the application of exterior and interior finishes. Upon graduation, students can continue their education through local union apprenticeships, a variety of partnering college programs, or the Association of Builders and Contractors. Through this project-based program, students learn about hand and power tool safety, measuring, layout, basic blueprint reading, basic wood joints, and material sizing. Additionally they learn basic trim methods, advanced framing methods, interior trim package installation, exterior, roofing, window and door installation, blueprint reading, and estimation. Advancement in the program means students will be eligible to increase their knowledge on roof framing, building layout, advanced exterior finishes, advanced interior finishes, blueprint reading, deck construction, and advanced estimation. Please visit the program webpage at https://www.dciu.org/Page/3314 |
| **Program Safety & Physical/Environmental Considerations** | Ability to lift 40 lbs<br>Ability to work in all weather conditions<br>Ability to work independently<br>No fear of heights or working on closed spaces<br>Physical strength and stamina<br>Hair pulled back<br>Safety equipment worn |
| **Essential skills** | Eye/hand/foot coordination<br>Flexibility<br>Critical thinking<br>Active listening<br>Judgement,decision making, and self control<br>Finger dexterity<br>Form perception<br>Manual dexterity<br>Spatial aptitude<br>Ability to work independently and in groups |
| **Grading Scale** | Knowledge (texts, quizzes, projects, assignments) 40%<br>Skills (Program of Study Competency Task List) 40%<br>Work Ethic (Professional Expectations, Employability Skills) 20% |

**Delaware County Technical High Schools**
*Skill Alignment Chart for:* Carpentry
CIP Code: 46.0201

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|---|---|
| **Grade Level of Textbook:** | Flesch-Kincaid Grade Level 11.8 (sample text) |
| **Reading & Language Arts Requirements** | Read grade level text independently and proficiently<br>Identify the main idea(s) of a text<br>Use academic words and phrases correctly<br>Determine and clarify the meaning of new words<br>Write short and long selections with a distinct focus<br>Develop a main idea or topic with specific details<br>Organize ideas, concepts, and information within writing selections<br>Conduct short and extended research projects<br>Use grade-appropriate grammar, capitalization, punctuation, and spelling<br>Participate effectively in collaborative discussions<br>Present information, findings, and supporting evidence clearly |
| **Math Requirements** | Sample Mathematics<br>Add, subtract, multiply, and divide whole numbers, fractions and decimals<br>Convert between decimals, fractions, and percent<br>Apply properties of exponents, rational and irrational numbers to solve problems<br>Identify and convert measurements using the Standard and Metric systems<br>Solve ratio and proportion problems<br>Manipulate formulas and equations<br>Graph linear equations<br>Apply the Pythagorean Theorem and trigonometric ratios to solve problems involving right triangles<br>Calculate angle measurements<br>Calculate perimeter, area, and volume of polygons<br>Analyze relationships between two-dimensional and three-dimensional objects<br>Calculate estimates for jobs |
| **Science Requirements** | Physical Science<br>Environmental Science |
| **Theory Time** | 40% |
| **Lab Time** | 60% |
| **Career Portfolio Requirements** | Career Objective Video<br>Career Research Essay<br>Education Research Graphic Organizer<br>Resume, Cover Letter, Interview Practice, Post Interview Thank You Email<br>The Responsible Employee - Scenarios<br>Resolving Workplace Conflicts - Scenarios<br>Interview an Expert Summary<br>Defining Entrepreneurship Response |
| **Homework** | OSHA courses; 1 hour per week computer based |
| **Assessments** | Math Assessment<br>Literacy Assessment<br>Quarterly Assessments<br>Quizzes (1-8 per marking period)<br>Tests (1-2 per marking period) |

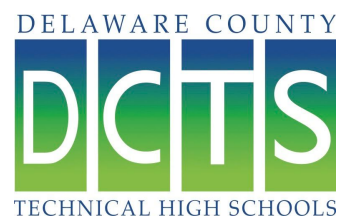| | NOCTI (mandatory for all CTC programs) |
|---|---|
| **Industry Certifications** | OSHA 10<br>Employability: Interviewing Skills<br>Ladder Certifications |
| **Study & Other Skills** | note taking skills<br>good attendance<br>Responsible<br>Ability to access computer based learning resources<br>Basic knowledge of Google products |
| **Dual Enrollment Opportunities** | Widener University - Gen Ed courses |
| **Articulation Agreements** | **Soar Credits:**<br>Harrisburg Area Community College-Harrisburg, Clarion University of Pennsylvania, Delaware County Community College, Thaddeus Stevens College of Technology, Johnson College, Orleans Technical Institute and Commonwealth Technical Institute.<br>**Articulation Agreements:**<br>Saint Francis University |
| **Uniform and other costs** | Students should expect to spend up to $200.00 in uniform and other supplies |
| **Career Pathways** | **Median Wage for Related Occupations**<br>Helpers - Carpenters $32,360<br>Carpenters $66,440<br>Lead Carpenters and Foremen $74,000<br>Supervisor, Construction $69,510 |
| **Transition Activities Completed in Program - Can be added to Transition Plan** | Opportunity to complete a career portfolio in compliance with the PA Future Ready Index and Career Readiness Standards<br>Opportunity to complete the competency task list for Carpentry<br>Opportunity to Interview an expert in the Carpentry Field<br>Opportunity to earn a safety certification<br>Opportunity to participate in college and career presentations |

**Delaware County Technical High Schools**
*Skill Alignment Chart for:* Collision Repair Technology
**CIP Code: 47.0603**

| Educational & Physical Attributes and Program Requirements | Recommended for Success |
|---|---|
| **Program Description** | Collision Repair Technology is based on an occupational analysis of the auto body field and reflects the entry-level job requirements of I-CAR (Inter-Industry Conference on Auto Collision Repair) and the Automotive Collision Technology standards. Using state-of-the-art equipment, students are taught MIG welding/cutting, metal repair, corrosion protection, masking, refinishing, undercoating, and unibody inspection. They are taught safety compliance, tools and equipment identification. Each student will gain the knowledge, understanding and training needed to secure a position in the collision repair field, and/or enter a post-secondary institution. |
| **Program Safety & Physical/Environmental Considerations** | Safety focus around moving equipment, hand tools, power tools<br>Ability to work with potentially toxic fumes in dusty environment<br>Stamina to stand for long periods of time<br>Problem solving skills<br>Any type of respiratory condition would be a concern |
| **Essential skills** | Equipment Maintenance<br>Eye/hand/foot coordination<br>Finger and manual dexterity<br>Form perception, spatial relationships<br>Troubleshooting<br>Complex problem solving<br>Time Management<br>Ability to work independently, read and follow directions |
| **Grading Scale** | Knowledge (texts, quizzes, projects, assignments) 40%<br>Skills (Program of Study Competency Task List) 40%<br>Work Ethic (Professional Expectations, Employability Skills) 20% |
| **Grade Level of Textbook:**<br><br>**Reading & Language Arts Requirements** | Flesch-Kincaid Grade Level: 9.5 (sample text)<br><br>Read grade level text independently and proficiently<br>Identify the main idea(s) of a text<br>Use academic words and phrases correctly<br>Determine and clarify the meaning of new words<br>Write short and long selections with a distinct focus<br>Develop a main idea or topic with specific details<br>Organize ideas, concepts, and information within writing selections<br>Conduct short and extended research projects<br>Use grade-appropriate grammar, capitalization, punctuation, and spelling<br>Participate effectively in collaborative discussions<br>Present information, findings, and supporting evidence clearly in repair/service reports |
| **Math Requirements** | Sample Mathematics<br>Adding, subtracting, multiplying, and dividing whole numbers, fractions and decimals |

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|---|---|
| | Working with a ruler in both English and Metric system<br>Converting between units in the metric system<br>Using Formulas<br>Manipulating equations |
| **Science Requirements** | Are there any Science Requirements? List Here |
| **Theory Time** | 25% |
| **Lab Time** | 75% |
| **Career Portfolio Requirements** | Career Objective Video<br>Career Research Essay<br>Education Research Graphic Organizer<br>Resume, Cover Letter, Interview Practice, Post Interview Thank You<br>    Email<br>The Responsible Employee - Scenarios<br>Resolving Workplace Conflicts - Scenarios<br>Interview an Expert Summary<br>Defining Entrepreneurship Response |
| **Homework** | Study for tests and quizzes, complete projects and missing assignments, OSHA safety training |
| **Assessments** | List Mandatory and other assessments including<br>Math Assessment<br>Literacy Assessment<br>Quarterly Assessment<br>Chapter Quizzes<br>Unit tests<br>Projects<br>NOCTI (mandatory for all CTC programs) |
| **Industry Certifications** | OSHA 10<br>Employability: Interviewing Skills |
| **Study & Other Skills** | Responsible<br>Note taking skills<br>Good Attendance<br>Ability to access computer based learning resources<br>Basic knowledge of Google products |
| **Dual Enrollment Opportunities** | Widener University - Gen ed courses |
| **Articulation Agreements** | **SOAR Credits**<br>Thaddeus Stevens College of Technology and Pennsylvania College of Technology<br>**Articulation Agreements**<br>Automotive Training Center and Saint Francis University |
| **Uniform and other costs** | Students can expect to spend about $50.00 on required uniform |
| **Career Pathways** | **Median Wage for Related Occupations** |

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| | Automotive Body & Related Repairs $50,000<br><br>Automotive Glass Installers & Repairers $33,950<br><br>Painters, Transportation Equipment $59,490<br><br>Supervisor, Mechanics & Repairers $67,340 |
| **Transition Activities Completed in Program - Can be added to Transition Plan** | Opportunity to complete a career portfolio in compliance with the PA Future Ready Index and Career Readiness Standards<br>Opportunity to complete the competency task list for the Collision Repair Program<br>Opportunity to Interview a expert in the Collision Repair Program<br>Opportunity to earn a safety certification<br>Opportunity to participate in college and career presentations |

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| Educational & Physical Attributes and Program Requirements | Recommended for Success |
|---|---|
| **Program Description** | The Computer Networking & Digital Forensics curriculum centers on networks and the computer devices that comprise a typical network, including building, maintaining, and supporting computer network systems forming the foundation for beginning a career in Information Technology. With a solid understanding of network fundamentals, a variety of careers related to information technology are possible. The industry career focus in the program is on desktop support, network engineering, digital forensics, and IT security. Industry certifications align with CompTIA including IT Fundamentals, A+, Network+ and Security+. Additionally, there is a copper-based certification. Computer based training certifications also include routing and switching. Upon achieving the skills and certifications offered in the program, students are competitive for entry level employment in Information Technology as well as many post-secondary colleges or universities. Please visit the program web page at https://www.dciu.org/Page/3316 |
| **Program Safety & Physical/Environmental Considerations** | Excellent self discipline to focus for long periods of time<br>Good eye/hand coordination<br>Stamina (ability to focus at work station for long periods of time)<br>Indoors, environmentally controlled |
| **Essential skills** | Critical thinking<br>Judgment and decision making<br>Reading comprehension<br>Systems analysis<br>Active listening<br>Complex problem solving<br>Troubleshooting<br>Time management<br>Social perceptiveness<br>Deductive reasoning<br>Inductive reasoning |
| **Grading Scale** | Knowledge (texts, quizzes, projects, assignments) 40%<br>Skills (Program of Study Competency Task List) 40%<br>Work Ethic (Professional Expectations, Employability Skills) 20% |
| **Grade Level of Textbook:**<br><br>**Reading & Language Arts Requirements** | Flesch-Kincaid Grade Level: 9.5 (sample text)<br><br>Read grade level text independently and proficiently<br>Identify the main idea(s) of a text<br>Use academic words and phrases correctly<br>Determine and clarify the meaning of new words<br>Write short and long selections with a distinct focus<br>Develop a main idea or topic with specific details<br>Organize ideas, concepts, and information within writing selections<br>Conduct short and extended research projects |

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|---|---|
| | Use grade-appropriate grammar, capitalization, punctuation, and spelling
Participate effectively in collaborative discussions
Present information, findings, and supporting evidence clearly |
| **Math Requirements** | Sample Mathematics
Add, subtract, multiply, and divide whole numbers, fractions and decimals
Apply properties of rational and irrational numbers to solve problems
Convert between decimals, fractions, and percent
Identify and convert between number systems including Decimal, Binary, Octal, and Hexadecimal
Identify and convert measurements using the Standard and Metric systems
Solve ratio and proportion problems
Manipulate formulas and equations
Calculate perimeter, area, and volume of polygons
Calculate estimates for jobs |
| **Science Requirements** | Computer Science |
| **Theory Time** | 40% |
| **Lab Time** | 60% |
| **Career Portfolio Requirements** | Career Objective Video
Career Research Essay
Education Research Graphic Organizer
Resume, Cover Letter, Interview Practice, Post Interview Thank You Email
The Responsible Employee - Scenarios
Resolving Workplace Conflicts - Scenarios
Interview an Expert Summary
Defining Entrepreneurship Response |
| **Homework** | List Homework requirements, including OSHA 10 completion |
| **Assessments** | List Mandatory and other assessments including
Math Assessment
Literacy Assessment
Quarterly Assessment
Quizzes (# per marking period)
NOCTI (mandatory for all CTC programs) |
| **Industry Certifications** | OSHA 10
Employability: Interviewing Skills
TestOut IT Fundamentals Pro
TestOut Client Pro
TestOut PC Pro
TestOut Network Pro
TestOut Security Pro
TestOut Routing and Switching Pro
Comp TIA IT Fundamentals
Copper Based Cabling Specialist
Access Data Certified Examiner (ACE) |

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| | Comp TIA A+ |
| | Comp TIA Network+ |
| | Comp TIA Security+ |
| **Study & Other Skills** | Good attendance |
| | Ability to work independently |
| | Work in small groups |
| | Ability to access computer based learning resources |
| | Basic knowledge of utilizing Google products |
| **Dual Enrollment Opportunities** | Widener University - Gen Ed Courses |
| **Articulation Agreements** | **SOAR Credits:** Bucks County Community College, Montgomery County Community College-Central Campus, Harrisburg Area Community College-Harrisburg, Mount Aloysius College, Community College of Allegheny County, Peirce College, Reading Area Community College, Westmoreland County Community College, Clarion University of Pennsylvania, Delaware County Community College, Luzerne County Community College, Northampton County Area Community College, Community College of Philadelphia, Thaddeus Steven College of Technology, Community College of Beaver County, Butler County Community College, Lehigh Carbon Community College, Pennsylvania Highlands Community College, Allegany College of Maryland and Johnson College<br><br>**Articulation Agreements:** Pennsylvania Institute of Technology, Neumann University, Pittsburgh Technical College, St. Francis University |
| **Uniform and other costs** | Students can expect to spend approximately $30.00 on uniform requirements. |
| **College/Career Pathways** | **with 4 year college degrees or higher**<br>Network Systems and Data Communications Analyst<br>Network and Computer Systems Administrator<br>Network/Security Systems Engineer<br>**with 2 year college degree**<br>Network Service Technician<br>Telecommunications Technologist<br>**with certifications**<br>Computer Support Specialist<br>LAN Specialist |
| **Transition Activities Completed in Program - Can be added to Transition Plan** | Opportunity to complete a career portfolio in compliance with the PA Future Ready Index and Career Readiness Standards<br>Opportunity to complete the competency task list for the Computer Networking & Digital Forensics Program & Sports Science Program<br>Opportunity to Interview an expert in the Computer Networking & Digital Forensics field<br>Opportunity to earn a safety certification<br>Opportunity to participate in college and career presentations |

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| Educational & Physical Attributes and Program Requirements | Recommended for Success |
|---|---|
| Program Description | The Cosmetology program focuses on the fundamentals of the profession. This enables students to confidently begin working with hair, skin and nails early in their training. Technical skill development blends with applied sciences to guide them toward a successful career as a salon professional. During this three-year, 1250-hour training program, students learn hair sculpture, color application, chemical texture, and skin and nail procedures. Students study a wide variety of scientific applications, such as the chemistry of cosmetics, biology, human anatomy, and physiology. Upon completion, graduates are fully prepared to take the Pennsylvania State Board of Cosmetology examination. Students learn the history and career opportunities of Cosmetology. Topics of study include Life Skills, Professional Image, Communicating for Success, Infection Control: Principles and Practices, Basics of Electricity, Properties of the Hair and Scalp, Principles of Hair Design, Scalp Care, Shampooing & Conditioning, Hairstyling, Braiding and Extensions, Hair Cutting, Hair Removal, Facials, Make-up, Manicuring, and Pedicuring.<br>Students must successfully complete the 1250 hour training program to qualify for the Pennsylvania State Board of Cosmetology Examination. Visit the program webpage at https://www.dciu.org/Page/3317 |
| Program Safety & Physical/Environmental Considerations | Ability to stand for long periods of time<br>Ability to work with strong chemicals odors (breathing and skin reactions)<br>Good hand/eye coordination |
| Essential skills | Color discrimination<br>Finger & manual dexterity<br>Active listening, speaking skills<br>Social perceptiveness<br>Manual dexterity<br>Excellent attendance |
| Grading Scale | Knowledge (texts, quizzes, projects, assignments) 40%<br>Skills (Program of Study Competency Task List) 40%<br>Work Ethic (Professional Expectations, Employability Skills) 20% |
| Grade Level of Textbook:<br><br>Reading & Language Arts Requirements | Flesch-Kincaid Grade Level 10.5 (sample text)<br><br>Read grade level text independently and proficiently<br>Identify the main idea(s) of a text<br>Use academic words and phrases correctly<br>Determine and clarify the meaning of new words<br>Write short and long selections with a distinct focus<br>Develop a main idea or topic with specific details<br>Organize ideas, concepts, and information within writing selections |

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| | Conduct short and extended research projects<br>Use grade-appropriate grammar, capitalization, punctuation, and spelling<br>Participate effectively in collaborative discussions<br>Present information, findings, and supporting evidence clearly |
| **Math Requirements** | Sample Mathematics<br>Add, subtract, multiply, and divide whole numbers, fractions and decimals<br>Apply properties of rational and irrational numbers to solve problems<br>Identify and convert measurements using the Standard and Metric systems<br>Solve ratio and proportion problems for mixing chemicals<br>Manipulate formulas and equations for electricity<br>Calculate angle measurements for haircuts<br>Use percent to calculate discounts and commission<br>Design a personal financial plan |
| **Science Requirements** | Chemistry of cosmetics<br>Anatomy<br>Physiology<br>Biology<br>Electricity |
| **Theory Time** | Percentage of Theory time 35% |
| **Lab Time** | Percentage of Lab time 65% |
| **Career Portfolio Requirements** | Career Objective Video<br>Career Research Essay<br>Education Research Graphic Organizer<br>Resume, Cover Letter, Interview Practice, Post Interview Thank You Email<br>The Responsible Employee - Scenarios<br>Resolving Workplace Conflicts - Scenarios<br>Interview an Expert Summary<br>Defining Entrepreneurship Response |
| **Homework** | OSHA 10 completion<br>Study and review for state law tests and chapter tests<br>Complete portfolio requirements |
| **Assessments** | Math Assessment<br>Literacy Assessment<br>Quarterly Assessment<br>Quizzes (# per marking period)<br>NOCTI (mandatory for all CTC programs) |
| **Industry Certifications** | OSHA 10<br>Employability: Interviewing Skills<br>Cosmetology license upon the completion of 1,250 hours and passing the State Board of Cosmetology licensing test<br>Barbicide certification |
| **Study & Other Skills** | Memorization of vocabulary<br>Fine Motor Skills<br>Visual-spatial skills |

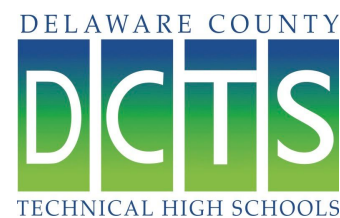| | |
|---|---|
| | Ability to access computer based learning resources<br>Basic knowledge of Google products |
| **Dual Enrollment Opportunities** | Widener University - Gen Ed Courses |
| **Articulation Agreements** | St. Francis University |
| **Uniform and other costs** | Students should expect to invest approximately $400 in specialized tools, uniforms, kits and reference books for this 3-year program. |
| **Career Pathways** | **Median Wage for Related Occupations**<br>Hairdressers, Hairstylists & Cosmetologists $28,080<br>Makeup Artists, Theatrical & Performance $67,570<br>Skincare Specialist $30,300 |
| **Transition Activities Completed in Program - Can be added to Transition Plan** | Opportunity to complete a career portfolio in compliance with the PA Future Ready Index and Career Readiness Standards<br>Opportunity to complete the competency task list for the Cosmetology program<br>Opportunity to interview an expert in the Cosmetology field<br>Opportunity to earn a safety certificationOpportunity to participate in college and career presentations |

**Delaware County Technical High Schools**
*Skill Alignment Chart for:* Culinary Arts
**CIP Code: 12.0508**

| Educational & Physical Attributes and Program Requirements | Recommended for Success |
|---|---|
| **Program Description** | The Culinary Arts program prepares students for success in the foodservice and hospitality industry. Students are taught food preparation, dining service, inventory control, safety, and sanitation. Students also learn nutrition, healthy cooking, equipment identification, use of hand tools, and culinary vocabulary. Students prepare soups and sauces, breakfast entrées, sandwich production, pies, cakes, yeast-raised products, entrée preparation, international dishes, vegetable preparation, garnishing, salads, and dressings. Students may seek immediate employment, enter an apprentice program or continue culinary or management studies at the postsecondary level. Culinary Arts is a creative program for students to learn teamwork, different techniques, and preparation skills. Students learn safety and sanitation efficiency as well as hospitality services. |
| **Program Safety & Physical/Environmental Considerations** | A focus on preparing, holding and serving food<br>A focus on safety around kitchen equipment, knives, and other tools and equipment found in the industry<br>Ability to work in a fast-paced environment<br>Good personal hygiene<br>Stamina needed to stand on feet for long periods of time<br>Industry dress uniform daily<br>Professional and meet industry standards |
| **Essential skills** | Active listening Skills<br>Speaking Skills<br>Service Orientation<br>Social Perceptiveness<br>Manual Dexterity<br>Excellent Attendance<br>Critical Thinking<br>Judgment and Decision Making<br>Working Cooperatively with others |
| **Grading Scale** | Knowledge (texts, quizzes, projects, assignments) 40%<br>Skills (Program of Study Competency Task List) 40%<br>Work Ethic (Professional Expectations, Employability Skills) 20% |
| **Grade Level of Textbook:**<br><br>**Reading & Language Arts Requirements** | Flesch-Kincaid Grade Level 10.8 (sample text)<br><br>Read grade level text independently and proficiently<br>Identify the main idea(s) of a text<br>Analyze and evaluate the series of steps in a recipe<br>Use academic words and phrases correctly<br>Determine and clarify the meaning of new words<br>Write short and long selections with a distinct focus<br>Develop a main idea or topic with specific details<br>Organize ideas, concepts, and information within writing selections<br>Conduct short and extended research projects |

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| | Use grade-appropriate grammar, capitalization, punctuation, and spelling |
| | Participate effectively in collaborative discussions |
| **Math Requirements** | [Sample Mathematics](#) |
| | Add, subtract, multiply, and divide whole numbers, fractions and decimals |
| | Apply properties of rational and irrational numbers to solve problems |
| | Convert between decimals, fractions, and percent |
| | Use percent to calculate food costs, commission, and yield percentage |
| | Identify and convert measurements using the Standard and Metric systems for volume and weight |
| | Solve ratio and proportion problems for recipe conversions |
| | Manipulate formulas and equations |
| | Calculate estimates for jobs |
| **Science Requirements** | Nutrition |
| | Chemistry of cooking |
| **Theory Time** | Percentage of Theory time  40% |
| **Lab Time** | Percentage of Lab time  60% |
| **Career Portfolio Requirements** | Career Objective Video |
| | Career Research Essay |
| | Education Research Graphic Organizer |
| | Resume, Cover Letter, Interview Practice, Post Interview Thank You Email |
| | The Responsible Employee - Scenarios |
| | Resolving Workplace Conflicts - Scenarios |
| | Interview an Expert Summary |
| | Defining Entrepreneurship Response |
| **Homework** | OSHA 10 completion |
| | Weekly writing assignment |
| **Assessments** | List Mandatory and other assessments including |
| | Math Assessment |
| | Literacy Assessment |
| | Quarterly Assessment |
| | Quizzes (# per marking period) |
| | NOCTI (mandatory for all CTC programs) |
| **Industry Certifications** | OSHA 10 Industry Certification |
| | Employability: Interviewing Skills |
| | ServSafe |
| **Study & Other Skills** | Memorization of measurement conversion |
| | Study and review for tests |
| | Good attendance |
| | Ability to work independently |
| | Work in small groups |
| | Ability to access computer based learning resources |
| | Basic knowledge of utilizing Google products |
| **Dual Enrollment Opportunities** | Widener University - Gen Ed Courses |

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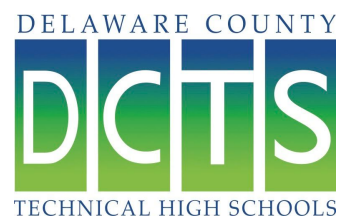| | |
|---|---|
| **Articulation Agreements** | **Soar Credits:** Montgomery County Community College-Central Campus, Harrisburg Area Community College-Harrisburg, Community College of Allegheny County, Westmoreland County Community College, Delaware County Community College, Luzerne County Community College, Community College of Philadelphia, SUNY College of Agriculture and Technology at Cobleskill, Community College of Beaver County, Lackawanna College, Pennsylvania College of Technology, Allegany College of Maryland and Commonwealth Technical Institute.<br>**Articulation Agreements**: Culinary Institute of America, Walnut Hill College (Restaurant School), St. Francis University, Pittsburgh Technical College |
| **Uniform and other costs** | Students can expect to spend approximately $100.00 in uniform costs. |
| **College/Career Pathways** | **with 4 year college degrees or higher**<br>Executive Chef<br>Hotel and Resort Manager<br>Food Industry Production Manager<br>**with 2 year college degrees**<br>Caterer<br>Chef<br>Pastry Chef<br>Sous Chef<br>Food Service Manager<br>**with certifications and/or specialized training**<br>Baker<br>Line Cook<br>Cake Decorator Prep<br>Pantry Cook |
| **Transition Activities Completed in Program - Can be added to Transition Plan** | Opportunity to complete a career portfolio in compliance with the PA Future Ready Index and Career Readiness Standards<br>Opportunity to complete the competency task list for the Culinary Arts program<br>Opportunity to Interview a expert in the Culinary Arts<br>Opportunity to earn a safety certification<br>Opportunity to participate in college and career presentations |

**Delaware County Technical High Schools**
*Skill Alignment Chart for:* Dental Occupations
**CIP Code: 510601**

| Educational & Physical Attributes and Program Requirements | Recommended for Success |
|---|---|
| **Program Description** | Students who enroll in the Dental Technology Program learn a variety of skills that will enable them to become a dental assistant, dental laboratory technician, and/or pursue a career as a dental hygienist, EFDA, or dentist. The dental assisting program focuses on patient-centered care in support of improving oral health as a key to personal health and well-being. The major areas of study in the course include: dental radiology, oral pathology, chair-side dental assisting, anatomy and physiology, dental materials, sterilization, and dental office business procedures. The dental assistant works directly with the dentist, performing a variety of tasks from helping the dentist examine and treat patients to completing laboratory and office work. |
| **Program Safety & Physical/Environmental Considerations** | Empathy to understand the pains and suffering of others<br>Good personal hygiene – hair pulled back, no artificial nails, facial piercings removed, no dangling earrings<br>Lift heavy objects/people<br>Not disturbed by incidences such as bodily fluids, surgeries, injections, traumatic situations<br>Prolonged standing, bending, & stooping |
| **Essential skills** | Basic computer & keyboarding skill<br>Demonstrate initiative, responsibility, and critical thinking skills<br>Attention to detail extremely important<br>Interpersonal skills<br>Manual dexterity<br>Service Orientation<br>Oral Comprehension<br>Oral Expression |
| **Grading Scale** | Knowledge (texts, quizzes, projects, assignments) 40%<br>Skills (Program of Study Competency Task List) 40%<br>Work Ethic (Professional Expectations, Employability Skills) 20% |
| **Grade Level of Textbook:**<br><br>**Reading & Language Arts Requirements** | Flesch-Kincaid Grade Level 12.6 (sample text)<br><br>Read grade level text independently and proficiently<br>Identify the main idea(s) of a text<br>Cite thorough textual evidence to support or explain a dental procedure<br>Use academic words and phrases correctly<br>Determine and clarify the meaning of new words<br>Write short and long selections with a distinct focus<br>Develop a main idea or topic with specific details<br>Organize ideas, concepts, and information within writing selections<br>Conduct short and extended research projects<br>Use grade-appropriate grammar, capitalization, punctuation, and spelling<br>Participate effectively in collaborative discussions<br>Present information, findings, and supporting evidence clearly to patients |
| **Math Requirements** | Sample Mathematics<br>Add, subtract, multiply, and divide whole numbers, fractions and decimals<br>Apply properties of exponents, rational and irrational numbers to solve problems |

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| | Convert between decimals, fractions, and percent<br>Identify and convert measurements using the Standard and Metric systems<br>Solve ratio and proportion problems<br>Manipulate formulas and equations<br>Summarize, represent, and interpret graphs and data displays<br>Represent, solve and interpret equations/inequalities and systems of equations/inequalities algebraically and graphically<br>Calculate angle measurements<br>Calculate estimates for jobs |
| **Science Requirements** | Anatomy & Physiology |
| **Theory Time** | 40% |
| **Lab Time** | 60% |
| **Career Portfolio Requirements** | Career Objective Video<br>Career Research Essay<br>Education Research Graphic Organizer<br>Resume, Cover Letter, Interview Practice, Post Interview Thank You Email<br>The Responsible Employee - Scenarios<br>Resolving Workplace Conflicts - Scenarios<br>Interview an Expert Summary<br>Defining Entrepreneurship Response |
| **Homework** | List Homework requirements, including OSHA 10 completion |
| **Assessments** | List Mandatory and other assessments including<br>Math Assessment<br>Literacy Assessment<br>Quarterly Assessment<br>Quizzes (# per marking period)<br>NOCTI (mandatory for all CTC programs) |
| **Industry Certifications** | OSHA 10<br>Employability: Interviewing Skills<br>CPR/AED<br>Prepare to obtain State Radiology Certification<br>Prepare to obtain Certified Dental Assistant (CDA) Dental Assistant National Board (DANB) certification*<br>*This program is not accredited by CODA. Graduates will need to work 3500 hours before they are eligible to sit for the exam |
| **Study & Other Skills** | Good attendance<br>Ability to work independently<br>Work in small groups<br>Ability to access computer based learning resources<br>Basic knowledge of utilizing Google products |
| **Dual Enrollment Opportunities** | Widener University - Gen Ed Courses |

**Delaware County Technical High Schools**
*Skill Alignment Chart for:* Dental Occupations
CIP Code: 510601

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| Articulation Agreements | **SOAR Credits:** Harrisburg Area Community College-Harrisburg, Westmoreland County Community College, Manor College, Harcum College and Greater Altoona Career & Technology Center. <br> **Articulation Agreements:** St. Francis University |
|---|---|
| Uniform and other costs | Students can expect to spend approximately $75-$100 for uniform requirements |
| College/Career Pathways | **with professional degrees: masters, doctorate** <br> Dentist <br> Orthodontist <br> Oral Surgeon <br> **with 2 year college degrees or certificate** <br> Dental Hygienist <br> Expanded Functions Dental Assistant <br> Dental Laboratory Technician <br> **with certifications** <br> Dental Assistant |
| **Transition Activities Completed in Program - Can be added to Transition Plan** | Opportunity to complete a career portfolio in compliance with the PA Future Ready Index and Career Readiness Standards <br> Opportunity to complete the competency task list for the Dental Program <br> Opportunity to Interview an expert in the Dental Technology field <br> Opportunity to earn a safety certification <br> Opportunity to participate in college and career presentations |

**Delaware County Technical High Schools**
*Skill Alignment Chart for:* **Early Childhood Education**
**CIP Code: 51.0601**

| Educational & Physical Attributes and Program Requirements | Recommended for Success |
|---|---|
| **Program Description** | The Early Childhood Education (ECE) program prepares students to work with young children in a variety of settings that require an understanding of how children grow, learn and develop. The curriculum is aligned with the National Child Care Association's core of 15 "Professional Abilities." Field experience and practicum provide opportunities to become involved in actual work with children. The program also prepares students for a Child Development Associate (CDA) certification.<br><br>Early Childhood Education prepares students to enter the workforce or continue their education in career areas related to childcare and guidance. |
| **Program Safety & Physical/Environmental Considerations** | Good physical health (current physical & TB test required)<br>Personal cleanliness<br>Bending, stooping, kneeling, sitting on the floor<br>Clearances Required |
| **Essential skills** | Organizational skills<br>Ability to be flexible with routine<br>Model social, emotional and cognitive skills to children<br>Ability to observe, interact and record data on children<br>Social Perceptiveness<br>Critical Thinking<br>Writing skills<br>Creative Arts<br>Active Listening, Public Speaking<br>Instructing Skills |
| **Grading Scale** | Knowledge (texts, quizzes, projects, assignments) 40%<br>Skills (Program of Study Competency Task List) 40%<br>Work Ethic (Professional Expectations, Employability Skills) 20% |
| **Grade Level of Textbook:**<br><br>**Reading & Language Arts Requirements** | Flesch-Kincaid Grade Level 10.4 (sample text)<br><br>Read grade level text independently and proficiently<br>Identify the main idea(s) of a text<br>Cite thorough textual evidence to support lesson plan and classroom management decisions<br>Use academic words and phrases correctly<br>Determine and clarify the meaning of new words<br>Write short and long selections with a distinct focus<br>Develop a main idea or topic with specific details<br>Organize ideas, concepts, and information within writing selections<br>Conduct short and extended research projects<br>Use grade-appropriate grammar, capitalization, punctuation, and spelling<br>Participate effectively in collaborative discussions |

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|---|---|
| | Present information, findings, and supporting evidence clearly |
| **Math Requirements** | Sample Mathematics<br>Add, subtract, multiply, and divide whole numbers, fractions and decimals<br>Convert between decimals, fractions, and percent<br>Apply properties of rational and irrational numbers to solve problems<br>Summarize, represent, and interpret graphs and data displays<br>Solve ratio and proportion problems |
| **Science Requirements** | None |
| **Theory Time** | 65% |
| **Lab Time** | 35% |
| **Career Portfolio Requirements** | Career Objective Video<br>Career Research Essay<br>Education Research Graphic Organizer<br>Resume, Cover Letter, Interview Practice, Post Interview Thank You Email<br>The Responsible Employee - Scenarios<br>Resolving Workplace Conflicts - Scenarios<br>Interview an Expert Summary<br>Defining Entrepreneurship Response |
| **Homework** | OSHA courses; 1 hour per week computer based |
| **Assessments** | Math Assessment<br>Literacy Assessment<br>Quarterly Assessments<br>Written chapter tests approximately every two weeks<br>Unit assignment to demonstrate knowledge approximately 1-2 times per quarter<br>NOCTI (mandatory for all CTC programs) |
| **Industry Certifications** | OSHA 10<br>Employability: Interviewing Skills<br>CDA Ready<br>First Aid/CPR<br>Mandated Reporter Training |
| **Study & Other Skills** | Computer Skills (Microsoft Office)<br>Time Management Skills<br>Ability to access computer based learning resources<br>Basic knowledge of Google products |
| **Dual Enrollment Opportunities** | Widener University - General Ed Courses |
| **Articulation Agreements** | **SOAR Credits:** Montgomery County Community College-Central Campus, Harrisburg Area Community College-Harrisburg, Mount Aloysius College, Community College of Allegheny College, Reading Area Community College, Luzerne County Community College, Manor College, Community College of Beaver County, Harcum College, Lackawanna College, Pennsylvania College of Technology and Pennsylvania Highlands Community College. |

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| | Articulation Agreements: Neumann University, Pennsylvania Institute of Technology, St. Francis University |
| **Uniform and other costs** | Students can expect to spend up to $50.00 in uniform costs and other supplies |
| **College/Career Pathways** | **with professional degrees: masters, doctorate** <br> Curriculum Developer <br> Education Administrator <br> **with 4 year college degrees or higher** <br> Kindergarten/Elementary School Teacher <br> Preschool Director <br> Special Education Teacher <br> **with certifications and/or specialized training** <br> Preschool Teacher <br> Teacher's Aide |
| **Transition Activities Completed in Program - Can be added to Transition Plan** | Opportunity to complete a career portfolio in compliance with the PA Future Ready Index and Career Readiness Standards <br> Opportunity to complete the competency task list for Early Childhood Education <br> Opportunity to Interview an expert in the Early Childhood Education Field <br> Opportunity to earn a safety certification <br> Opportunity to participate in college and career presentations |

**Delaware County Technical High Schools** *Skill Alignment Chart for:*
**Electrical Construction Technology**
**CIP Code: 46.0399**

| Educational & Physical Attributes and Program Requirements | Recommended for Success |
|---|---|
| **Program Description** | This program provides students with an introduction to the basic concepts of residential and commercial wiring. With an emphasis on safety, students install circuits, switches, conductors, circuit breakers, and other electrical devices. Topics covered include selecting and ordering materials, key supplies and tools, codes, blueprint reading, and low voltage wiring. Students are taught in compliance with the National Electrical Code (NEC) and the Residential Construction Academy (RCA) industry standards. Students begin working toward their RCA and OSHA 10 certifications immediately. When students first explore this program, they learn safety, tools, residential wiring, blueprints, circuitry, devices, raceways, bending, OHM's Law, and work to complete OSHA 10. As students continue in the program, they attain employability skills. Students gain more in-depth knowledge with respect to safety & tools, commercial wiring, review of blueprints, devices, raceways, bending, panels, disconnects, and circuitry. Visit the program webpage at https://www.dciu.org/Page/3322 |
| **Program Safety & Physical/Environmental Considerations** | Ability to lift 50 lbs<br>Ability to work in all weather conditions<br>Ability to work independently<br>Good eye/hand coordination<br>No fear of heights or working in closed spaces<br>Physical strength and stamina |
| **Essential skills** | Strong Math Skills<br>English/Reading Comprehension<br>Science Skills<br>Customer/Personal Service<br>Critical Thinking Skills<br>Active Listening and Learning<br>Time Management, Judgement, Decision Making, Self Control<br>Eye/hand/foot coordination<br>Finger dexterity<br>Form<br>Good color discrimination<br>Manual dexterity<br>Spatial |
| **Grading Scale** | Knowledge (texts, quizzes, projects, assignments) 40%<br>Skills (Program of Study Competency Task List) 40%<br>Work Ethic (Professional Expectations, Employability Skills) 20% |
| **Grade Level of Textbook:**<br><br>**Reading & Language Arts Requirements** | Flesch-Kincaid Grade Level 12.7 (sample text)<br><br>Read grade level text independently and proficiently<br>Identify the main idea(s) of a text<br>Interpret and evaluate a text that explain the series of steps in electrical concepts and repairs |

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| | Use academic words and phrases correctly |
| | Determine and clarify the meaning of new words |
| | Write short and long selections with a distinct focus |
| | Develop a main idea or topic with specific details |
| | Organize ideas, concepts, and information within writing selections |
| | Conduct short and extended research projects |
| | Use grade-appropriate grammar, capitalization, punctuation, and spelling |
| | Participate effectively in collaborative discussions |
| | Present information, findings, and supporting evidence clearly with customers |
| **Math Requirements** | Sample Mathematics |
| | Add, subtract, multiply, and divide whole numbers, fractions and decimals |
| | Convert between decimals, fractions, and percent |
| | Apply properties of exponents, rational and irrational numbers to solve problems |
| | Identify and convert measurements using the Standard and Metric systems |
| | Solve ratio and proportion problems |
| | Manipulate formulas and equations |
| | Graph linear equations |
| | Apply the Pythagorean Theorem and trigonometric ratios to solve problems involving right triangles |
| | Calculate angle measurements |
| | Calculate perimeter, area, and volume of polygons |
| | Analyze relationships between two-dimensional and three-dimensional objects |
| | Calculate estimates for jobs |
| **Science Requirements** | Physical Science |
| | Environmental Science |
| **Theory Time** | 50% |
| **Lab Time** | 50% |
| **Career Portfolio Requirements** | Career Objective Video |
| | Career Research Essay |
| | Education Research Graphic Organizer |
| | Resume, Cover Letter, Interview Practice, Post Interview Thank You Email |
| | The Responsible Employee - Scenarios |
| | Resolving Workplace Conflicts - Scenarios |
| | Interview an Expert Summary |
| | Defining Entrepreneurship Response |
| **Homework** | OSHA courses; 2 Hours per week computer based |
| **Assessments** | Quarterly Assessment |
| | Math/Literacy Assessments- Quarterly |
| | Chapter Tests |
| | Quizzes |
| | NOCTI (mandatory for all CTC programs) |
| **Industry Certifications** | OSHA 10 |
| | Employability: Interviewing Skills |
| | Ladder Safety Training provided by the American Ladder Institute |

**Delaware County Technical High Schools *Skill Alignment Chart for:*
Electrical Construction Technology
CIP Code: 46.0399**

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|---|---|
| **Study & Other Skills** | Good attendance<br>Ability to follow directions<br>Ability to follow oral and written instructions<br>Follow dress code everyday<br>Mature behavior<br>Ability to access computer based learning resources<br>Basic knowledge of utilizing Google products |
| **Dual Enrollment Opportunities** | Widener University - General Ed Courses |
| **Articulation Agreements** | SOAR Credits: Harrisburg Area Community College-Harrisburg, Orleans Technical Institute and Rosedale Technical College.<br>Articulation Agreements: St. Francis University, Pittsburgh Technical College |
| **Uniform and other costs** | Uniform<br>Shirt<br>PPE and Tools<br>$500 approximately |
| **College/Career Pathways** | **Median Wage for Related Occupations**<br><br>Trades & Extraction Workers $87,520<br><br>Electricians $81,210<br><br>Helpers - Electricians $39,120<br><br>Supervisors - Mechanics, Installers & Repairers $74,290<br><br>Security & Fire Alarms System Installers $48,180<br><br>Electrical Power Line Installers & Repairers $85,950<br><br>Signal & Track Switch Repairers $69,770 |
| **Transition Activities Completed in Program - Can be added to Transition Plan** | Opportunity to complete a career portfolio in compliance with the PA Future Ready Index and Career Readiness Standards<br>Opportunity to complete the competency task list for Electrical<br>Opportunity to Interview an expert in the Electrical Field<br>Opportunity to earn a safety certification<br>Opportunity to participate in college and career presentations |

| Educational & Physical Attributes and Program Requirements | Recommended for Success |
|---|---|
| **Program Description** | The Emergency and Protective Services program offers a comprehensive public safety education to students interested in pursuing a career or volunteering in the emergency medical, law enforcement, fire, security, industrial safety or emergency management services. Students work with protective service professionals to gain first-hand experience in all areas of these exciting professions. Units of study include cadet firefighting, law enforcement, emergency medical services, communications and report writing, public speaking and physical training. Students receive instruction in the field as well as the classroom. Students are required to have a high degree of motivation and self-discipline, as well as the ability to obtain Child Abuse and Criminal Background Clearances. Visit the program page at https://www.dciu.org/Page/3323 |
| **Program Safety & Physical/Environmental Considerations** | Able to lift 50 pounds and up to 100 pounds<br>Ability to work independently<br>Able to work under pressure/in adverse conditions/within time constraints<br>Good conflict resolution skills & an even temperament (not prone to aggressive behaviors) |
| **Essential skills** | Math Skills<br>Science Skills<br>Reading Comprehension & Writing Skills<br>Manual & Finger Dexterity<br>Motor/hand/foot/eye coordination<br>Verbal Communication<br>Critical thinking<br>Social Perceptiveness<br>Judgment and Decision Making<br>Complex Problem Solving<br>Interpersonal Skills |
| **Grading Scale** | Knowledge (texts, quizzes, projects, assignments) 40%<br>Skills (Program of Study Competency Task List) 40%<br>Work Ethic (Professional Expectations, Employability Skills) 20% |
| **Grade Level of Textbook:**<br><br>**Reading & Language Arts Requirements** | Flesch-Kincaid Grade Level 11.7 (sample text)<br><br>Read grade level text independently and proficiently<br>Identify the main idea(s) of a text<br>Cite textual evidence to support an analysis of a process or procedure<br>Analyze and evaluate the series of steps required for a procedure<br>Use academic words and phrases correctly<br>Determine and clarify the meaning of new words<br>Write short and long selections with a distinct focus<br>Develop a main idea or topic with specific details<br>Organize ideas, concepts, and information within writing selections<br>Conduct short and extended research projects |

DELAWARE COUNTY
DCTS
TECHNICAL HIGH SCHOOLS

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|---|---|
| | Use grade-appropriate grammar, capitalization, punctuation, and spelling |
| **Math Requirements** | Sample Mathematics |
| | Adding, subtracting, multiplying, and dividing whole   numbers, fractions and decimal |
| | Using Conversion factors |
| | Converting between "Military Time" and "Standard Time" |
| | Using Formulas |
| | Manipulating equations |
| | Calculating Volume and other quantities |
| | Strong measuring & estimating skills |
| **Science Requirements** | Chemistry |
| | Biology |
| **Theory Time** | Percentage of Theory time   60% |
| **Lab Time** | Percentage of Lab time     40% |
| **Career Portfolio Requirements** | Career Objective Video |
| | Career Research Essay |
| | Education Research Graphic Organizer |
| | Resume, Cover Letter, Interview Practice, Post Interview Thank You Email |
| | The Responsible Employee - Scenarios |
| | Resolving Workplace Conflicts - Scenarios |
| | Interview an Expert Summary |
| | Defining Entrepreneurship Response |
| **Homework** | OSHA 10 completion |
| | Memorization of medical terms |
| | Review and study for tests |
| **Assessments** | Math Assessment |
| | Literacy Assessment |
| | Quarterly Assessment |
| | Quizzes |
| | NOCTI (mandatory for all CTC programs) |
| **Industry Certifications** | OSHA 10 |
| | Employability: Interviewing Skills |
| | CPR/AED |
| | First Aid |
| | National Emergency Responder |
| | National Incident Management Systems |
| | Certification |
| **Study & Other Skills** | Attention to detail, Good attendance |
| | Basic computer & keyboarding skills |
| | Clean criminal background check |
| | Demonstrate initiative, responsibility, time management & critical thinking skills |
| | Good physical health and neat appearance |
| | Memorization & note/test-taking skills |
| | Ability to access computer based learning resources |

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| | Basic knowledge of utilizing Google products |
| **Dual Enrollment Opportunities** | Widener University - General Ed Courses |
| **Articulation Agreements** | **SOAR Credits:** Montgomery County Community College-Central Campus, Harrisburg Area Community College, Community College of Allegheny, Westmoreland County Community College, Manor College, Community College of Beaver County, Harcum College and Lackawanna College Articulation Agreements: Pennsylvania Institute of Technology, St. Francis University, Pittsburgh Technical College |
| **Uniform and other costs** | Students can expect to spend up to $100 in uniform costs. |
| **College/Career Pathways** | What are the college and career pathways and including Jobs, pay scale and education needed (O-Net)<br><br>Find out more information about Careers in Emergency Protective Services at https://www.onetonline.org/ |
| **Transition Activities Completed in Program - Can be added to Transition Plan** | Opportunity to complete a career portfolio in compliance with the PA Future Ready Index and Career Readiness Standards<br>Opportunity to complete the competency task list for the Emergency Protective Services program.<br>Opportunity to Interview a expert in the Emergency Protective Services program<br>Opportunity to earn a safety certification<br>Opportunity to participate in college and career presentations |

**Delaware County Technical High Schools**
*Skill Alignment Chart for:* Engineering & Robotics
CIP Code: 15.9999

DELAWARE COUNTY
DCTS
TECHNICAL HIGH SCHOOLS

| Educational & Physical Attributes and Program Requirements | Recommended for Success |
|---|---|
| **Program Description** | The Engineering program will prepare students to apply knowledge and skills in the engineering field. Using Project Lead the Way (PLTW) curriculum, instruction will include safety, ethics, power, problem solving, teamwork, engineering graphics, automated systems, fundamental electronics and manufacturing systems as well as adhering to the Science, Technology, Engineering and Mathematics (STEM) initiative. PLTW Engineering course work engages students in interdisciplinary activities like working with a client to design a home, programming electronic devices or robotic arms, or exploring algae as a biofuel source. These activities not only build knowledge and skills in engineering, but also empower students to develop essential skills such as problem solving, critical and creative thinking, communication, collaboration, and perseverance. Advanced Aerial Education (AAE) curriculum will be integrated within the Engineering program to introduce students to the commercial use of "unmanned aircraft systems" (drones). Visit the program page at https://www.dciu.org/Page/3324 |
| **Program Safety & Physical/Environmental Considerations** | Excellent Hand/Eye coordination<br>Attention to detail extremely important<br>Ability to convert 2-dimensional drawings into 3-dimensional projects |
| **Essential skills** | 1st year students must be enrolled or have taken Algebra 1<br>2nd year students must be enrolled or have taken Geometry<br>Mechanical ability<br>Ability to work independently<br>Ability to work in small groups<br>Excellent oral and written communication skills<br>Good judgement and decision making<br>Self-Control<br>Follows oral and written directions<br>Time management skills<br>Excellent fine motor skills<br>College Prep Courses<br>Finger and manual dexterity<br>Form perception<br>Motor coordination<br>Spatial and Visual Reasoning Skills<br>Critical thinking skills<br>Problem Solving<br>Troubleshooting<br>Active Learning and Listening |
| **Grading Scale** | Knowledge (texts, quizzes, projects, assignments) 40%<br>Skills (Program of Study Competency Task List) 40%<br>Work Ethic (Professional Expectations, Employability Skills) 20% |
| **Grade Level of Textbook:** | Flesch-Kincaid Grade Level 12.3 (sample text)<br><br>Read grade level text independently and proficiently |

**Delaware County Technical High Schools**
*Skill Alignment Chart for:* **Engineering & Robotics**
**CIP Code: 15.9999**

DELAWARE COUNTY
DCTS
TECHNICAL HIGH SCHOOLS

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| **Reading & Language Arts Requirements** | Identify the main idea(s) of a text<br>Analyze how an author's ideas or claims are developed in a text<br>Cite thorough textual evidence to support the analysis of a text<br>Analyze, interpret, and evaluate the series of ideas or events in a text<br>Use academic words and phrases correctly<br>Determine and clarify the meaning of new words<br>Write short and long selections with a distinct focus<br>Develop a main idea or topic with specific details<br>Organize ideas, concepts, and information within writing selections<br>Conduct short and extended research projects, including labs<br>Use grade-appropriate grammar, capitalization, punctuation, and spelling<br>Participate effectively in collaborative discussions<br>Present information, findings, and supporting evidence clearly in lab reports |
| **Math Requirements** | Sample Mathematics<br>Add, subtract, multiply, and divide whole numbers, fractions and decimals<br>Convert between decimals, fractions, and percent<br>Apply properties of exponents, rational and irrational numbers to solve problems<br>Identify and convert measurements using the Standard and Metric systems<br>Solve ratio and proportion problems<br>Manipulate formulas and equations<br>Graph, solve and interpret equations/inequalities and systems of equations/inequalities algebraically and graphically<br>Understand functions and their graphs on a coordinate plane<br>Apply the Pythagorean Theorem and trigonometric ratios to solve problems involving right triangles<br>Calculate angle measurements to the nearest 1˚<br>Create geometric constructions<br>Calculate perimeter, area, and volume of polygons<br>Analyze relationships between two-dimensional and three-dimensional objects<br>Calculate estimates for jobs |
| **Science Requirements** | Physics<br>Computer Science |
| **Theory Time** | 60% |
| **Lab Time** | 40% |
| **Career Portfolio Requirements** | Career Objective Video<br>Career Research Essay<br>Education Research Graphic Organizer<br>Resume, Cover Letter, Interview Practice, Post Interview Thank You Email<br>The Responsible Employee - Scenarios<br>Resolving Workplace Conflicts - Scenarios<br>Interview an Expert Summary<br>Defining Entrepreneurship Response |
| **Homework** | OSHA Courses; 2 hours per week computer based |
| **Assessments** | Quarterly Assessment<br>Writing assessment- quarterly<br>Quizzes 4 times per quarter |

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| | Math/Literacy assessment-quarterly<br>NOCTI (mandatory for all CTC programs)<br>Projects<br>Presentations<br>Reports |
| **Industry Certifications** | OSHA 10 Hour Safety<br>Employability:  Interviewing Skills |
| **Study & Other Skills** | Good attendance<br>Ability to work independently<br>Note taking<br>Strong desire to solve problems<br>Time management<br>Ability to access computer based learning resources<br>Basic knowledge of Google products |
| **Dual Enrollment Opportunities** | Widener University - General Ed Courses |
| **Articulation Agreements** | **SOAR Credits:** Montgomery County Community College-Central Campus and Harrisburg Area Community College-Harrisburg.<br>**Articulation Agreements:** St. Francis University, Pennsylvania Institute of Technology |
| **Uniform and other costs** | Uniform<br>Shirt - $15 and up for Tee-shirt<br>Tools - $40 to $75 |
| **Career Pathways** | **Median Wage for Related Occupations:**<br><br>Electro-Mechanical Technicians - $57,300<br>Engineering Technicians - $68,470<br>Robotics Technicians - $50,000<br>Robotics Operators - $31,671<br>Electrical Engineer - $91, 710 |
| **Transition Activities Completed in Program - Can be added to Transition Plan** | Opportunity to complete a career portfolio in compliance with the PA Future Ready Index and Career Readiness Standards<br>Opportunity to complete the competency task list for Engineering<br>Opportunity to Interview an expert in the Engineering Field<br>Opportunity to earn a safety certification<br>Opportunity to participate in college and career presentations |

**Delaware County Technical High Schools**
*Skill Alignment Chart for:* Exercise Therapy & Sports Science
**Program Name- CIP Code: 51.2604**

| Educational & Physical Attributes and Program Requirements | Recommended for Success |
|---|---|
| **Program Description** | "Exercise Therapy & Sports Science" is for high school students interested in pursuing careers in Sports Medicine, Athletic Training, Physical Therapy, Occupational Therapy, Exercise Physiology, Fitness Training, and Nutrition. The salary range for these careers range from $27,000-$205,000 depending on the level of post-secondary education and career choice. Students who complete this DCTS program could potentially earn certifications in the following areas: Personal Training, First Aide, CPR, and AED. The projected job growth for occupations related to this program is up to 33% higher than the average growth rate for all careers!<br><br>**Core Curriculum:** Legal and Ethical Issues, Communication, Infection Control, Disaster Preparedness, Emergency Care and First Aide, Human Needs and Development, Moving, Lifting, Positioning and Body Mechanics, Nutrition and Hydration, Basic Clinical Skills, Mental Health and Wellness, Rehabilitation and Restorative Care, Medical Terminology, Administrative Skills, Anatomy, Physiology and Pathophysiology, Mathematics in Rehabilitative Care and Concussion Management.<br><br>Please visit the program page at https://www.dciu.org/Page/3325 |
| **Program Safety & Physical/Environmental Considerations** | Emotional and mental stability<br>Empathy to understand the pains and suffering of others<br>Good personal hygiene – hair pulled back, no artificial nails, facial piercings removed, no dangling earrings<br>Lift heavy objects/people (30-50 Lbs)<br>Not disturbed by incidences such as bodily fluids, surgeries, injections, traumatic situations<br>Prolonged standing, bending, & stooping |
| **Essential skills** | Manual & Finger Dexterity<br>Motor/hand/foot/eye coordination<br>Verbal Communication<br>Social perceptiveness<br>Judgment and Decision Making<br>Complex Problem Solving<br>Understand medical jargon<br>Ability to learn anatomy and physiology |
| **Grading Scale** | Knowledge (texts, quizzes, projects, assignments) 40%<br>Skills (Program of Study Competency Task List) 40%<br>Work Ethic (Professional Expectations, Employability Skills) 20% |
| **Grade Level of Textbook**<br><br>**Reading & Language Arts Requirements** | Flesch-Kincaid Grade Level 12.9  (sample text)<br><br>Read grade level text independently and proficiently<br>Identify the main idea(s) of a text<br>Cite thorough textual evidence to support the analysis of an injury<br>Analyze, interpret, and evaluate the series of steps needed for a procedure |

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|---|---|
| | Use academic words and phrases correctly<br>Determine and clarify the meaning of new words<br>Write short and long selections with a distinct focus<br>Develop a main idea or topic with specific details<br>Organize ideas, concepts, and information within writing selections<br>Conduct short and extended research projects, including labs<br>Use grade-appropriate grammar, capitalization, punctuation, and spelling<br>Participate effectively in collaborative discussions<br>Present information, findings, and supporting evidence clearly for patients |
| **Math Requirements** | Sample Mathematics<br>Add, subtract, multiply, and divide whole numbers, fractions and decimals<br>Convert between decimals, fractions, and percent<br>Apply properties of exponents, rational and irrational numbers to solve problems<br>Identify and convert measurements using the Standard and Metric systems<br>Solve ratio and proportion problems<br>Manipulate formulas and equations<br>Summarize, represent, and interpret graphs and data displays<br>Understand functions and their graphs on a coordinate plane<br>Recognize and evaluate random processes underlying statistical experiments<br>Apply the Pythagorean Theorem and trigonometric ratios to solve problems involving right triangles<br>Calculate angle measurements for joint angles and range of motion<br>Calculate estimates for jobs |
| **Science Requirements** | Anatomy & Physiology<br>Sports Medicine<br>Nutrition Science |
| **Theory Time** | 60% |
| **Lab Time** | 40% |
| **Career Portfolio Requirements** | Career Objective Video<br>Career Research Essay<br>Education Research Graphic Organizer<br>Resume, Cover Letter, Interview Practice, Post Interview Thank You Email<br>The Responsible Employee - Scenarios<br>Resolving Workplace Conflicts - Scenarios<br>Interview an Expert Summary<br>Defining Entrepreneurship Response |
| **Homework** | Study and review theory<br>OSHA 10 completion |
| **Assessments** | List Mandatory and other assessments including<br>Math Assessment<br>Literacy Assessment<br>Quarterly Assessment<br>Quizzes (# per marking period)<br>NOCTI (mandatory for all CTC programs) |
| **Industry Certifications** | OSHA 10<br>Employability: Interviewing Skills |

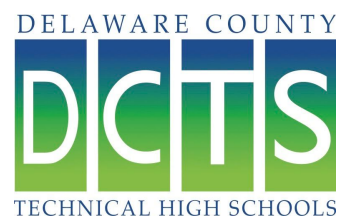| | |
|---|---|
| | CPR/AED <br> AMCA - Physical Therapy Aide Certification <br> National Academy of Sports Medicine - Certified Personal Trainer |
| **Study & Other Skills** | Good attendance <br> Ability to work independently <br> Work in small groups <br> Ability to access computer based learning resources <br> Basic knowledge of utilizing Google products |
| **Dual Enrollment Opportunities** | Immaculata University, Widener University |
| **Articulation Agreements** | Pennsylvania Institute of Technology, Neumann University and Saint Francis University |
| **Uniform and other costs** | Students can expect to spend up to $75.00 for uniform requirements. |
| **Career Pathways** | **Median Wage for Related Occupations:** <br><br> Occupational Therapy Aides - $32,580 <br> Physical Therapy Aides - $27,840 <br> Personal Trainer - $46,250 <br> Athletic Trainer - $46,150 <br> Physical Therapist - $84,620 |
| **Transition Activities Completed in Program - Can be added to Transition Plan** | Opportunity to complete a career portfolio in compliance with the PA Future Ready Index and Career Readiness Standards <br> Opportunity to complete the competency task list for the Exercise Therapy & Sports Science Program <br> Opportunity to Interview an expert in the Exercise Therapy & Sports Science <br> Opportunity to earn a safety certification <br> Opportunity to participate in college and career presentations |

| Educational & Physical Attributes and Program Requirements | Recommended for Success |
|---|---|
| **Program Description** | This is a healthcare career exploration program culminating with the opportunity to choose a Medical Assisting or Patient Care Technician pathway. Course content includes anatomy, physiology, pathophysiology, medical terminology, safety, infection control, medical law and ethics, as well as patient care skills. The Health Sciences curriculum is a foundation for all health career pathways in which students may choose to train for a Certified Clinical Medical Assisting certification or a Patient Care Technician certification (PCTC). Please visit the program page at https://www.dciu.org/Page/3326 |
| **Program Safety & Physical/Environmental Considerations** | Emotional and mental stability<br>Empathy to understand the pains and suffering of others<br>Good personal hygiene – hair pulled back, no artificial nails, facial piercings removed, no dangling earrings, visible tattoos.<br>Lift heavy objects/people<br>Not disturbed by incidences such as bodily fluids, surgeries, injections, traumatic situations<br>Prolonged standing, bending, & stooping<br>Clearances Required |
| **Essential skills** | Math Skills<br>Reading Comprehension and Writing skills<br>Strong science skills<br>Complex Problem Solving<br>Social Perceptiveness<br>Service Orientation<br>Critical Thinking Skills<br>Interpersonal Skills |
| **Grading Scale** | Knowledge (texts, quizzes, projects, assignments) 40%<br>Skills (Program of Study Competency Task List) 40%<br>Work Ethic (Professional Expectations, Employability Skills) 20% |
| **Grade Level of Textbook:**<br><br>**Reading & Language Arts Requirements** | Flesch-Kincaid Grade Level 12.3 (sample text)<br><br>Read grade level text independently and proficiently<br>Identify the main idea(s) of a text<br>Cite thorough textual evidence to support the analysis of procedure or diagnosis<br>Analyze, interpret, and evaluate the series of steps needed for a procedure<br>Use academic words and phrases correctly<br>Determine and clarify the meaning of new words<br>Write short and long selections with a distinct focus<br>Develop a main idea or topic with specific details<br>Organize ideas, concepts, and information within writing selections<br>Conduct short and extended research projects, including labs<br>Use grade-appropriate grammar, capitalization, punctuation, and spelling<br>Participate effectively in collaborative discussions<br>Present information, findings, and supporting evidence clearly for patients |

**Delaware County Technical High Schools**
*Skill Alignment Chart for:* Health Sciences
CIP Code: 51.9999

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|---|---|
| **Math Requirements** | Sample Mathematics<br>Adding, subtracting, multiplying, and dividing whole numbers, fractions and decimals<br>Using Conversions<br>Measuring and recording height and weight<br>Using formulas<br>Converting between English and Metric system<br>Converting between "Military time" and Standard time"<br>Converting from ounces to milliliters<br>Converting between units in the decimal system |
| **Science Requirements** | Biology<br>Anatomy & Physiology |
| **Theory Time** | Percentage of Theory time 65% |
| **Lab Time** | Percentage of Lab time  35% |
| **Career Portfolio Requirements** | Career Objective Video<br>Career Research Essay<br>Education Research Graphic Organizer<br>Resume, Cover Letter, Interview Practice, Post Interview Thank You Email<br>The Responsible Employee - Scenarios<br>Resolving Workplace Conflicts - Scenarios<br>Interview an Expert Summary<br>Defining Entrepreneurship Response |
| **Homework** | OSHA 10 completion<br>Memorization of medical terminology<br>Study and review for tests |
| **Assessments** | Math Assessment<br>Literacy Assessment<br>Quarterly Assessment<br>3 quizzes per marking period<br>3 tests per marking period<br>1 research project per semester<br>NOCTI (mandatory for all CTC programs) |
| **Industry Certifications** | First Aid<br>CPR<br>OSHA 10<br>Employability: Interviewing Skills<br>Medical Assistant Certification (MAC)<br>Patient Care Technician certification (PCTC) |
| **Study & Other Skills** | Attention to detail extremely important<br>Basic computer & keyboarding skills<br>Excellent note taking and listening skills<br>Ability to access computer based learning resources<br>Basic knowledge of utilizing Google products |
| **Dual Enrollment Opportunities** | Widener University - General Ed Courses |

| Articulation Agreements | **Soar Credits:** Harrisburg Area Community College-Harrisburg, Mount Aloysius College, Harcum College, Lackawanna College, Greater Altoona Career & Technology Center, Johnson College, Lenape Technical School Practical Nursing Program, Central Pennsylvania Institute of Science and Technology, Western Area Career and Technology Center, Greater Johnstown Career and Technology Center and Crawford County Career and Technical Center Practical Nursing Program.<br><br>**Articulation Agreements:** Neumann University, St. Francis University |
|---|---|
| **Uniform and other costs** | Students can expect to spend up to $100 in uniform and other requirements. |
| **Career Pathways** | **Median Wage for Related Occupations**<br>Healthcare Technologists & Technicians, all other $43,120<br>Healthcare Practitioners & Technical Workers, all other $82,870<br>Healthcare support worker $38,850<br>Nurse, Other Specialist $69,170 |
| **Transition Activities Completed in Program - Can be added to Transition Plan** | Opportunity to complete a career portfolio in compliance with the PA Future Ready Index and Career Readiness Standards<br>Opportunity to complete the competency task list for the Health Sciences program<br>Opportunity to Interview a expert in the Health Sciences program<br>Opportunity to earn a safety certification<br>Opportunity to participate in college and career presentations |

**Delaware County Technical High Schools**
*Skill Alignment Chart for:* HVAC/Plumbing
**CIP Code: 47.0201**

DELAWARE COUNTY
DCTS
TECHNICAL HIGH SCHOOLS

| Educational & Physical Attributes and Program Requirements | Recommended for Success |
|---|---|
| **Program Description** | HVAC and plumbing professionals are instrumental in ensuring that homes and buildings function properly on a daily basis. The HVAC and Plumbing Technology program introduces students to the basic concepts of residential and commercial work. With an emphasis on safety, students work with copper, black pipe, electric, and full HVAC systems. Topics covered include selecting and ordering materials, supplies, tools, codes, blueprint reading, and low voltage wiring. Students learn about safety, tools, residential work, blueprints, basic HVAC systems, and basic plumbing skills. Students are taught in compliance with the International Code Council (ICC) Plumbing, Mechanical, Fuel Gas Code and the Residential Construction Academy (RCA) industry standards. Visit the program webpage at https://www.dciu.org/Page/3327 |
| **Program Safety & Physical/Environmental Considerations** | A focus on safety around HVAC equipment, hand tools, power tools and other equipment found in the industry<br>Ability to work independently, read and follow directions<br>Able to lift 50lbs<br>Good eye hand coordination<br>Stamina to stand for long periods of time<br>Ability to work in small, cramped, dark and damp spaces |
| **Essential skills** | Finger and manual dexterity<br>Form perception<br>Motor coordination<br>Visual and Spatial thinking skills<br>Strong Math Skills<br>Mechanical Reasoning<br>Computers and Electronic Engineering<br>Troubleshooting |
| **Grading Scale** | Knowledge (texts, quizzes, projects, assignments) 40%<br>Skills (Program of Study Competency Task List) 40%<br>Work Ethic (Professional Expectations, Employability Skills) 20% |
| **Grade Level of Textbook**<br><br>**Reading & Language Arts Requirements** | Flesch-Kincaid Grade Level 12.3 (sample text)<br><br>Read grade level text independently and proficiently<br>Identify the main idea(s) of a text<br>Interpret and evaluate a text that explain the series of steps in HVAC concepts and repairs<br>Use academic words and phrases correctly<br>Determine and clarify the meaning of new words<br>Write short and long selections with a distinct focus<br>Develop a main idea or topic with specific details<br>Organize ideas, concepts, and information within writing selections<br>Conduct short and extended research projects<br>Use grade-appropriate grammar, capitalization, punctuation, and spelling |

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|---|---|
| | Participate effectively in collaborative discussions<br>Present information, findings, and supporting evidence clearly with customers |
| **Math Requirements** | Sample Mathematics<br>Add, subtract, multiply, and divide whole numbers, fractions and decimals<br>Convert between decimals, fractions, and percent<br>Apply properties of exponents, rational and irrational numbers to solve problems<br>Identify and convert measurements using the Standard and Metric systems<br>Solve ratio and proportion problems<br>Manipulate formulas and equations<br>Graph linear equations<br>Apply the Pythagorean Theorem and trigonometric ratios to solve problems involving right triangles<br>Calculate angle measurements<br>Calculate perimeter, area, and volume of polygons<br>Analyze relationships between two-dimensional and three-dimensional objects<br>Calculate estimates for jobs |
| **Science Requirements** | Physical Science<br>Environmental Science |
| **Theory Time** | 40% |
| **Lab Time** | 60% |
| **Career Portfolio Requirements** | Career Objective Video<br>Career Research Essay<br>Education Research Graphic Organizer<br>Resume, Cover Letter, Interview Practice, Post Interview Thank You Email<br>The Responsible Employee - Scenarios<br>Resolving Workplace Conflicts - Scenarios<br>Interview an Expert Summary<br>Defining Entrepreneurship Response |
| **Homework** | 1-2 hours per weekly including OSHA 10, portfolios, trade journals |
| **Assessments** | Quarterly Assessment<br>Math Assessment<br>Reading Assessment<br>Module Tests from Textbook<br>NOCTI (Required for all CTE programs) |
| **Industry Certifications** | OSHA 10<br>Employability: Interviewing Skills<br>Ladder Safety<br>EPA 608 (Environmental Protection Agency) certification |
| **Study & Other Skills** | Good attendance<br>Interpersonal skills<br>Active Listening<br>Critical Thinking Skills<br>Ability to access computer based learning resources<br>Basic knowledge of utilizing Google products |

**Delaware County Technical High Schools**
*Skill Alignment Chart for:* HVAC/Plumbing
**CIP Code: 47.0201**

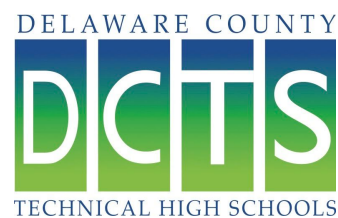| | |
|---|---|
| **Dual Enrollment Opportunities** | Widener University - General Ed Courses |
| **Articulation Agreements** | **SOAR Credits:** Harrisburg Area Community College-Harrisburg, Community College of Allegheny County, Westmoreland County Community College, Clarion University of Pennsylvania, Delaware County Community College, Luzerne County Community College, Northampton County Area Community College, Thaddeus Stevens College of Technology, Butler County Community College, Lehigh Carbon Community College, Johnson College, Orleans Technical Institute and Rosedale Technical College.<br><br>**Articulation Agreements:** University of Northwestern, Philadelphia Suburban University (PHCC) and Saint Francis University. |
| **Uniform and other costs** | Students can expect to spend up to $350 in required uniform and tools |
| **Career Pathways** | Median Wage for Related Occupations<br>Solar Photovoltaic Installers $42,680<br>Heating, Air Conditioning & Refrigeration Mechanics & Installers $55,170<br>HVAC Service Managers $75,250 |
| **Transition Activities Completed in Program - Can be added to Transition Plan** | Opportunity to complete a career portfolio in compliance with the PA Future Ready Index and Career Readiness Standards<br>Opportunity to complete the competency task list for the Heating, Ventilation, Air Conditioning (HVAC) & Plumbing<br>Opportunity to Interview an expert in the HVAC Field<br>Opportunity to earn a safety certification<br>Opportunity to participate in college and career presentations |

**Delaware County Technical High Schools**
*Skill Alignment Chart for:* Logistics & Inventory Management
CIP Code: 52.0203

DELAWARE COUNTY

DCTS

TECHNICAL HIGH SCHOOLS

| Educational & Physical Attributes and Program Requirements | Recommended for Success |
|---|---|
| **Program Description** | The Logistics & Inventory Management program introduces students to the distribution service industry. The course curriculum prepares students to work in distribution centers, warehouses, and supply rooms. Students learn safety standard compliance, tool and equipment identification, operation of industrial lift and transport equipment, data entry, and communication skills. People with careers in Logistics and Inventory Management work with an inventory of raw materials and finished parts. They move raw materials to the production line, unload trucks with raw materials, wrap pallets of finished products for shipment, and communicate with traffic managers. Students develop these skills while managing and operating the DCIU Distribution Center and the Science Material Center for Delaware County. Visit the program webpage at https://www.dciu.org/Page/3328 |
| **Program Safety & Physical/Environmental Considerations** | Ability to lift 50 lbs<br>Ability to work in all weather conditions<br>Ability to work independently<br>Ability to work as a team member<br>Good eye/hand coordination<br>Physical strength and stamina<br>Hair pulled back<br>Safety equipment worn |
| **Essential skills** | Eye/hand/foot coordination<br>Finger dexterity<br>Form perception<br>Manual dexterity<br>Keyboarding skills<br>Social perceptiveness<br>Resource management<br>Active listening and speaking skills<br>Spatial awareness |
| **Grading Scale** | Knowledge (texts, quizzes, projects, assignments) 40%<br>Skills (Program of Study Competency Task List) 40%<br>Work Ethic (Professional Expectations, Employability Skills) 20% |
| **Grade Level of Textbook**<br><br>**Reading & Language Arts Requirements** | Flesch-Kincaid Grade Level: 9.5 (sample text)<br><br>Read grade level text independently and proficiently<br>Identify the main idea(s) of a text<br>Use academic words and phrases correctly<br>Determine and clarify the meaning of new words<br>Write short selections with a focus<br>Develop a main idea or topic with specific details<br>Organize information within writing selections<br>Conduct short research projects<br>Use grade-appropriate grammar, capitalization, punctuation, and spelling<br>Participate effectively in collaborative discussions |

# Delaware County Technical High Schools
## *Skill Alignment Chart for:* Logistics & Inventory Management
## CIP Code: 52.0203

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|---|---|
| **Math Requirements** | [Mathematics Sample](#)<br>Adding, subtracting, multiplying, and dividing whole numbers, fractions and decimals<br>Accurately reading a tape measure<br>Accurately reading a scale<br>Extracting data from charts and other sources and using it appropriately<br>Using formulas |
| **Science Requirements** | Physical Science |
| **Theory Time** | 30% |
| **Lab Time** | 70% |
| **Career Portfolio Requirements** | Career Objective Video<br>Career Research Essay<br>Education Research Graphic Organizer<br>Resume, Cover Letter, Interview Practice, Post Interview Thank You Email<br>The Responsible Employee - Scenarios<br>Resolving Workplace Conflicts - Scenarios<br>Interview an Expert Summary<br>Defining Entrepreneurship Response |
| **Homework** | Study for tests and quizzes, OSHA safety training |
| **Assessments** | List Mandatory and other assessments including<br>Math Assessment<br>Literacy Assessment<br>Quarterly Assessment<br>Chapter Quizzes<br>Unit Assessment<br>NOCTI (mandatory for all CTC programs) |
| **Industry Certifications** | OSHA 10<br>Employability: Interviewing Skills<br>Forklift Certification |
| **Study & Other Skills** | Ability to multitask<br>Understand and perform multi-step directions/tasks<br>Note taking skills<br>Ability to access computer based learning resources<br>Basic knowledge of utilizing Google products |
| **Dual Enrollment Opportunities** | Widener University - General Ed Courses |
| **Articulation Agreements** | **SOAR Credit**: Johnson College<br>**Articulation Agreement**: St. Francis University |
| **Uniform and other costs** | Students can expect to spend up to $150 in uniform requirements |
| **Career Pathways** | Median Wage for Related Occupations:<br>Industrial Production Managers $140,960<br>Transportation, Storage & Distribution Managers $120,090<br>Logisticians $91,390<br>Supervisors - Helpers, Laborers & Materials Movers $47,360 |

DELAWARE COUNTY

DCTS

TECHNICAL HIGH SCHOOLS

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|---|---|
| | Supervisors - Tran & Material - Moving Machine/ Vehicle Oprs 59,060 |
| **Transition Activities Completed in Program - Can be added to Transition Plan** | Opportunity to complete a career portfolio in compliance with the PA Future Ready Index and Career Readiness Standards<br>Opportunity to complete the competency task list for the Logistics and Inventory Program<br>Opportunity to Interview a expert in the Logistics and Inventory Program<br>Opportunity to earn a safety certification<br>Opportunity to participate in college and career presentations |

**Delaware County Technical High Schools**
*Skill Alignment Chart for:* **Management Information Systems**
**CIP Code: 52.1201**

DELAWARE COUNTY
**DCTS**
TECHNICAL HIGH SCHOOLS

| Educational & Physical Attributes and Program Requirements | Recommended for Success |
|---|---|
| **Program Description** | Management Information Systems is a series of methods of collecting, compiling, and analyzing large quantities of data to satisfy our society's ever-increasing need for information. With increasing frequency it is apparent that an understanding of technology is a necessary part of general education for students who live and work in our technological society.Students acquire the skills to analyze, design, implement, test, and document an application solution. The students utilize a state-of-the-art network computer system and its associated peripheral equipment to work on live problems, utilizing business software and object-oriented integrated development environments. Concepts delivered provide the basis of understanding in the area of computer programming and are applicable to business applications, mobile applications, and video gaming. Students will create a relational database, receive instruction in a variety of computer programming languages including writing, testing and debugging code; writing related system user documentation; demonstrating an understanding of core computer concepts to include the internet and the basic functions of business desktop applications; and analyzing common hardware, software and network processes. Students will receive instruction in business ethics and law, economics, office procedures and communications. Students will learn office safety, computer fundamentals, database administration and computer maintenance/troubleshooting. Please visit the program webpage at https://www.dciu.org/Page/3310 |
| **Program Safety & Physical/Environmental Considerations** | Ability to work independently<br>Excellent self discipline to focus for long periods of time<br>Good eye/hand coordination<br>Stamina (ability to focus at work station for long periods of time) |
| **Essential skills** | Clerical perception<br>Color discrimination<br>Finger dexterity<br>General learning<br>Locate evidence<br>Analyze evidence<br>Make inferences<br>Draw conclusions<br>Summarize<br>Work in  small groups<br>Identify main idea and differentiate from details<br>Determine word meanings from context |
| **Grading Scale** | Knowledge (texts, quizzes, projects, assignments) 40%<br>Skills (Program of Study Competency Task List) 40%<br>Work Ethic (Professional Expectations, Employability Skills) 20% |

**Delaware County Technical High Schools**
*Skill Alignment Chart for:* **Management Information Systems**
**CIP Code: 52.1201**

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|---|---|
| **Grade Level of Textbook** | Flesch-Kincaid Grade Level 10.9 (sample text) |
| **Reading & Language Arts Requirements** | Read grade level text independently and proficiently<br>Identify the main idea(s) of a text<br>Use academic words and phrases correctly<br>Determine and clarify the meaning of new words<br>Write short and long selections with a distinct focus<br>Develop a main idea or topic with specific details<br>Organize ideas, concepts, and information within writing selections<br>Conduct short and extended research projects<br>Use grade-appropriate grammar, capitalization, punctuation, and spelling<br>Participate effectively in collaborative discussions<br>Present information, findings, and supporting evidence clearly |
| **Math Requirements** | Sample Mathematics<br>Add, subtract, multiply, and divide whole numbers, fractions and decimals<br>Apply properties of rational and irrational numbers to solve problems<br>Convert between decimals, fractions, and percent<br>Identify and convert between number systems including Decimal, Binary, Octal, and Hexadecimal<br>Identify and convert measurements using the Standard and Metric systems<br>Solve ratio and proportion problems<br>Manipulate formulas and equations<br>Calculate perimeter, area, and volume of polygons<br>Calculate estimates for jobs |
| **Science Requirements** | Computer Science |
| **Theory Time** | 50% |
| **Lab Time** | 50% |
| **Career Portfolio Requirements** | Career Objective Video<br>Career Research Essay<br>Education Research Graphic Organizer<br>Resume, Cover Letter, Interview Practice, Post Interview Thank You Email<br>The Responsible Employee - Scenarios<br>Resolving Workplace Conflicts - Scenarios<br>Interview an Expert Summary<br>Defining Entrepreneurship Response |
| **Homework** | OSHA 10 completion |
| **Assessments** | List Mandatory and other assessments including<br>Math Assessment<br>Literacy Assessment<br>Quarterly Assessment<br>2-4 quizzes per marking period<br>NOCTI (mandatory for all CTC programs) |
| **Industry Certifications** | OSHA 10 |

DELAWARE COUNTY
DCTS
TECHNICAL HIGH SCHOOLS

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|---|---|
| | Employability: Interviewing Skills |
| **Study & Other Skills** | Good attendance<br>Communication skills<br>Ability to work in groups<br>Ability to work independently<br>Ability to access computer based learning resources<br>Basic knowledge of utilizing Google products |
| **Dual Enrollment Opportunities** | Widener University - General Ed Courses |
| **Articulation Agreements** | **SOAR Credits:** Harrisburg Area Community College, Pierce College, Luzerne County Community College, Manor College<br>**Articulation Agreement:** Neumann University |
| **Uniform and other costs** | Students can be expected to spend up to $50 in uniform costs |
| **Career Pathways** | Median Wage for Related Occupations<br>Computer User Support Specialist $51,160<br>Electrical & Electronic Engineering Technicians $52,810<br>Search Engine Optimization Specialist $51,965<br>Computer Programmer $84,880 |
| **Transition Activities Completed in Program - Can be added to Transition Plan** | Opportunity to complete a career portfolio in compliance with the PA Future Ready Index and Career Readiness Standards<br>Opportunity to complete the competency task list for the Management Information Systems Program<br>Opportunity to Interview an expert in the Management Information Systems field<br>Opportunity to earn a safety certification<br>Opportunity to participate in college and career presentations |

**Delaware County Technical High Schools**
*Skill Alignment Chart for:* Medical Careers
**CIP Code: 51.9999**

| Educational & Physical Attributes and Program Requirements | Recommended for Success |
|---|---|
| **Program Description** | This *Senior only* program provides students with the opportunity to participate in clinical rotations at their assigned hospitals. They will be working and observing alongside doctors and nurses while visiting patient rooms. Students will observe various aspects of their assigned hospitals including Emergency Room, Operating Room, Pediatrics, Hospital Pharmacy, and more. This year-long program is offered at seven different area hospitals. Students benefit from career-based presentations from an array of healthcare professionals including nurses, physicians, physician assistants, physical therapists, medical technologists and pharmacists. The curriculum includes anatomy, physiology, pathophysiology, medical terminology, safety, infection control and medical law and ethics. Students graduate from the program with a solid understanding of the integral relations of the hospital team and a vision of their potential role in the healthcare industry.<br>***There is a supplemental application process for this competitive, honors level program.***<br>Hospitals: Crozer-Chester Medical Center, Bryn Mawr Hospital, Mercy Fitzgerald Hospital, Lankenau Medical Center, Taylor Hospital, Riddle Hospital and Delaware County Memorial Hospital.<br>Visit the program webpage at https://www.dciu.org/Page/3329 |
| **Program Safety & Physical/Environmental Considerations** | Emotional and mental stability<br>Empathy to understand the pains and suffering of others<br>Excellent personal hygiene – hair pulled back, no artificial nails, facial piercings removed, no dangling earrings, no visible tattoos<br>Lift heavy objects/people up 50 lbs<br>Not disturbed by incidences such as bodily fluids, surgeries, injections, traumatic situations<br>Prolonged standing, bending, & stooping |
| **Essential skills** | Strong science skills<br>Complex Problem Solving<br>Social Perceptiveness<br>Service Orientation<br>Critical Thinking Skills<br>Good judgement and decision making skills<br>Ability to work independently and with medical professionals<br>Good oral and written communication skills |
| **Grading Scale** | Knowledge (texts, quizzes, projects, assignments) 80%<br>Skills (Program of Study Competency Task List) 10%<br>Work Ethic (Professional Expectations, Employability Skills) 10% |
| **Grade Level of Textbook:** | Flesch-Kincaid Grade Level 13.8 (sample text)<br><br>Read grade level text independently and proficiently |

**Delaware County Technical High Schools**
*Skill Alignment Chart for:* Medical Careers
**CIP Code: 51.9999**

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|---|---|
| **Reading & Language Arts Requirements** | Identify the main idea(s) of a text<br>Cite thorough textual evidence to support the analysis of procedure or diagnosis<br>Analyze, interpret, and evaluate the series of steps needed for a procedure<br>Analyze, interpret, and evaluate the causes and remedies of various medical conditions<br>Use academic words and phrases correctly<br>Determine and clarify the meaning of new words<br>Write short and long selections with a distinct focus<br>Develop a main idea or topic with specific details<br>Organize ideas, concepts, and information within writing selections<br>Conduct short and extended research projects, including labs<br>Use grade-appropriate grammar, capitalization, punctuation, and spelling<br>Participate effectively in collaborative discussions<br>Present information, findings, and supporting evidence clearly for patients |
| **Math Requirements** | Sample Mathematics<br>Add, subtract, multiply, and divide whole numbers, fractions and decimals<br>Convert between decimals, fractions, and percent<br>Apply properties of exponents, rational and irrational numbers to solve problems<br>Identify and convert measurements using the Standard and Metric systems<br>Solve ratio and proportion problems<br>Manipulate formulas and equations<br>Summarize, represent, and interpret graphs and data displays<br>Recognize and evaluate random processes underlying statistical experiments<br>Analyze decisions and strategies using probability concept<br>Make inferences and justify conclusions based on sample surveys, experiments, and observational studies<br>Calculate angle measurements<br>Calculate estimates<br>Measure and record height, weight, and blood pressure<br>Record input/output charts |
| **Science Requirements** | Strong Science Skills, Anatomy, Biology, Chemistry |
| **Theory Time** | 60% |
| **Lab Time** | 40% |
| **Career Portfolio Requirements** | Career Objective Video<br>Career Research Essay<br>Education Research Graphic Organizer<br>Resume, Cover Letter, Interview Practice, Post Interview Thank You Email<br>The Responsible Employee - Scenarios<br>Resolving Workplace Conflicts - Scenarios<br>Interview an Expert Summary<br>Defining Entrepreneurship Response |
| **Homework** | Completion of  OSHA 10<br>Some written/studying approx. 1 hr/night |

**Delaware County Technical High Schools**
*Skill Alignment Chart for:* Medical Careers
**CIP Code: 51.9999**

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|---|---|
| **Assessments** | Quarterly Assessment<br>Quizzes - 2-3 per marking period<br>Tests - 2-3 per marking period<br>3 Article Reviews<br>2 Research Papers<br>NOCTI (mandatory for all CTC programs) |
| **Industry Certifications** | OSHA-10<br>American Heart Association (AHA) BLS Provider CPR and AED<br>American Heart Association (AHA) Heartsaver First Aid |
| **Study & Other Skills** | Complex problem solving<br>Social Perceptiveness<br>Service orientation<br>Critical thinking skills<br>Good judgement and decision making skills<br>Ability to work independently and with medical professionals<br>Good attendance<br>Good oral and written communication skills<br>Work in small groups<br>Ability to access computer based learning resources<br>Basic knowledge of utilizing Google products |
| **Dual Enrollment Opportunities** | Immaculata University<br>Widener University |
| **Articulation Agreements** | **SOAR Credits**: Harrisburg Area Community College-Harrisburg, Mount Aloysius College, Harcum College, Lackawanna College, Greater Altoona Career & Technology Center, Johnson College, Lenape Technical School Practical Nursing Program, Central Pennsylvania Institute of Science and Technology, Western Area Career and Technology Center, Greater Johnstown Career and Technology Center and Crawford County Career and Technical Center Practical Nursing Program<br>**Articulation Agreements:** Neumann University, St. Francis University |
| **Uniform and other costs** | Uniform<br>Watch with a 2nd hand<br>CPR/FA cards |
| **Career Pathways** | **Median Wages for Related Occupations**<br>Healthcare Technologists & Technicians, all other $43,120<br>Healthcare Practitioners & Technical Workers, all other $82,870<br>Healthcare support worker $38,850<br>Nurse, Other Specialist $69,170 |
| **Transition Activities Completed in Program - Can be added to Transition Plan** | Opportunity to complete a career portfolio in compliance with the PA Future Ready Index and Career Readiness Standards<br>Opportunity to complete the competency task list for the Medical Careers Program<br>Opportunity to Interview an expert in the Medical Careers field<br>Opportunity to earn a safety certification<br>Opportunity to participate in college and career presentations |

Delaware County Technical High Schools
*Skill Alignment Chart for:* Welding
CIP Code: 48.0508

DELAWARE COUNTY
DCTS
TECHNICAL HIGH SCHOOLS

| Educational & Physical Attributes and Program Requirements | Recommended for Success |
|---|---|
| **Program Description** | The welding industry can be extremely rewarding due to the fact that employers have a constant need for skilled welders. Welding is used in manufacturing, construction and many other industries. In the Welding Technology program, students are taught oxy-fuel gas cutting principles and practices, arc cutting principles and practices, and welding inspection and testing principles. Welding Technology students research careers in the welding field and learn how to weld in all positions. Further, they learn how to interpret blueprints and layout projects from cutting to tacking to full completion of projects. Students learn about precision cuts in steel plates using superheated gases and learn how steel is formed from a liquid to solid. Students also gain handson training in a variety of welding procedures including shielded metal arc welding (STICK), gas metal arc welding (MIG), flux cored arc welding (FCAW) and gas tungsten arc welding (TIG). In this program, students learn how to use the proper equipment for testing welds, destruction, and hardness testing. They gain experience in reading and understanding manuals and specification charts for the welding process. The students learn how to use grinders and chemical baths for surface cleaning, proper clamping techniques, and welding standards established by the American Welding Society. Visit the program webpage at https://www.dciu.org/Page/3523 |
| **Program Safety & Physical/Environmental Considerations** | A focus on safety around welding equipment, hand tools, power tools and other equipment found in the industry<br>Ability to work independently, read and follow directions<br>Able to lift 50lbs<br>Good eye hand coordination<br>Stamina to stand for long periods of time |
| **Essential skills** | Finger and manual dexterity<br>Form perception<br>Motor coordination<br>Spatial<br>Critical Thinking<br>Troubleshooting<br>Active Learning and Listening<br>Math Skills<br>Ability to work independently & in teams<br>Judgement & decision making |
| **Grading Scale** | Knowledge (texts, quizzes, projects, assignments) 40%<br>Skills (Program of Study Competency Task List) 40%<br>Work Ethic (Professional Expectations, Employability Skills) 20% |
| **Grade Level of Textbook** | Flesch-Kincaid Grade Level 11.9 (sample text) |

DELAWARE COUNTY
DCTS
TECHNICAL HIGH SCHOOLS

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| **Reading & Language Arts Requirements** | Read grade level text independently and proficiently<br>Identify the main idea(s) of a text<br>Interpret and evaluate a text that explain the series of steps in welding procedures<br>Use academic words and phrases correctly<br>Determine and clarify the meaning of new words<br>Write short and long selections with a distinct focus<br>Develop a main idea or topic with specific details<br>Organize ideas, concepts, and information within writing selections<br>Conduct short and extended research projects<br>Use grade-appropriate grammar, capitalization, punctuation, and spelling<br>Participate effectively in collaborative discussions<br>Present information, findings, and supporting evidence clearly with customers |
| **Math Requirements** | [Sample Mathematics](#)<br>Add, subtract, multiply, and divide whole numbers, fractions and decimals<br>Convert between decimals, fractions, and percent<br>Apply properties of exponents, rational and irrational numbers to solve problems<br>Identify and convert measurements using the Standard and Metric systems<br>Solve ratio and proportion problems<br>Manipulate formulas and equations<br>Graph linear equations<br>Apply the Pythagorean Theorem and trigonometric ratios to solve problems involving right triangles<br>Calculate angle measurements<br>Calculate perimeter, area, and volume of polygons<br>Create geometric constructions<br>Analyze relationships between two-dimensional and three-dimensional objects<br>Calculate estimates for jobs |
| **Science Requirements** | Physical Science<br>Environmental Science |
| **Theory Time** | 40% |
| **Lab Time** | 60% |
| **Career Portfolio Requirements** | Career Objective Video<br>Career Research Essay<br>Education Research Graphic Organizer<br>Resume, Cover Letter, Interview Practice, Post Interview Thank You Email<br>The Responsible Employee - Scenarios<br>Resolving Workplace Conflicts - Scenarios<br>Interview an Expert Summary<br>Defining Entrepreneurship Response |
| **Homework** | OSHA courses; 2 Hours per week computer based |
| **Assessments** | Quarterly Assessment<br>Weekly project based assessments |

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|---|---|
| | Math/Literacy Assessment - Quarterly<br>NOCTI (mandatory for all CTC programs) |
| **Industry Certifications** | AWS - Certified Welder Certifications<br>OSHA 10 Hour Safety<br>Employability: Interviewing Skills |
| **Study & Other Skills** | Good attendance<br>Responsible<br>Ability to access computer based learning resources<br>Basic knowledge of utilizing Google products |
| **Dual Enrollment Opportunities** | Widener University - General Ed Courses |
| **Articulation Agreements** | **Soar Credits:** Harrisburg Area Community College, Community College of Allegheny County, Westmoreland Community College, Delaware County Community College, Thaddeus Stevens College of Technology, Pennsylvania College of Technology |
| **Uniform and other costs** | Uniform<br>Denim Jeans, Shirt/Sweatshirt<br>PPE<br>$250 approximately |
| **Career Pathways** | Median Wage for Related Occupations<br>Sheet metal workers $48,000<br>Welders, Cutters, Solderers & Brazers $50,600<br>Boilermakers $50,000<br>Pipefitters $58,000 |
| **Transition Activities Completed in Program - Can be added to Transition Plan** | Opportunity to complete a career portfolio in compliance with the PA Future Ready Index and Career Readiness Standards<br>Opportunity to complete the competency task list for Welding<br>Opportunity to Interview an expert in the Welding Field<br>Opportunity to earn a safety certification<br>Opportunity to participate in college and career presentations |

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