



The logo for NEWTEC consists of the word "NEWTEC" in a bold, red, sans-serif font.



## PROGRAM ARTICULATION AGREEMENT

**College Program: Multi-Occupational Trades**  
**Career Pathway: Construction**  
**Career Cluster: Architecture and Construction**

**CIP: 98.0001**

The purpose of this agreement is to grant college credit to high school students who have achieved the level of knowledge and skill required for the college-equivalent entry-level course(s) identified in this agreement. Upon successful completion of the identified course competencies with a grade of 'B' (3.0) or higher and the high school teacher's endorsement that the competency requirements have been met, articulated credit will be granted.

**The following Spokane Community College course(s) have been approved for Tech Prep articulation with Curlew School District high school course(s) as listed below:**

High Schools	College Courses	Credits
Curlew HS Applied Math (CORD curriculum units 1-12)	SCC APLED 112 Applied Mathematics	3

*\*see attached list(s) of competencies for articulated courses*

### Student Articulation Procedure:

1. Be enrolled in the required high school class.
2. Register for Tech Prep/Dual Credit articulated course during the same academic year the high school class is completed. If a series of courses are involved in the articulation, students register for credit during the same academic year the last course in the series is completed. **Students cannot earn "retroactive credit" for courses taken in previous years.**
3. Earn a grade of 'B' (3.0) or better in all courses required under the articulation agreement.
4. Complete all required skills as identified on the competency profile.
5. If an exam or review of completed work is required under the terms of this agreement, students must receive a passing score (determined by college or industry certification) to earn college credit (*see competency list for requirements*).

### High School Instructors:

1. Ensure all students receive a copy of the course syllabus outlining information about Tech Prep, the college course competencies and the process required to earn college credit.
2. Hold students accountable for the same competency standard and course expectations as required by the college-equivalent course (*see competency list attached*).
3. If required for articulation, ensure students are prepared to take industry certification exams, complete a professional portfolio documenting their work, or take a final exam to measure their level of skill and competence in the coursework.
4. Submit final grades for all students registered to earn Tech Prep college credit no later than June of the current academic year.
5. Attend scheduled meetings, workshops or in-service activities that enhance the high school/college partnership & support implementation of the Tech Prep articulated program.

### Articulation Review and Renewal:


The designated program facilitators, college administrators and/or instructors and high school faculty will meet regularly to revise or discuss the articulation agreement. Agreements must be reviewed/updated and re-signed by college faculty/deans and CTE directors/HS teachers on a schedule, not to exceed a three (3) year rotation, or as deemed necessary due to changes in HS/college course content or structure. Individual

teacher verification forms must be signed and submitted annually. Minor revisions can be made via phone calls, correspondence or e-mail.


**PROGRAM ARTICULATION AGREEMENT  
Multi-Occupational Trades**

**PARTICIPATING INSTITUTIONS  
Curlew School District and Spokane Community College**

We the undersigned representatives of the Northeast Washington Technical Education Consortium (NEWTEC), agree to all provisions of the articulation program/course agreement, have reviewed the course competencies, and understand the process to which students may be granted college credit through the Tech Prep program. We commit staff time and resources to ensure successful program implementation.

  
Steve McCullough, Date  
Curlew SD Superintendent/CTE Director

  
Sally Grabicki, Date  
SCC Faculty

  
Dave Devoe, Date  
Curlew HS Teacher

  
Dave Cox, Date  
SCC Program Dean

  
Nancy Fair-Szofran, Date  
Provost

Original 02/17/10  
Renewal 11/20/13

# Spokane Community College

## Applied Mathematics APLED 112

### Evaluation Criteria

- 4- **Highly Proficient:** Can complete task quickly and accurately, can direct others in how to do task. Demonstrates an excellent understanding of the competency and/or critical objective. Needs only normal supervision.
- 3- **Competent:** Can do all parts of the task. Needs only spot check of complete work. Demonstrates a very good understanding of the competency and/or critical objective. Meets minimum entry-level requirements. Needs job-entry supervision.
- 2- **Partially Proficient:** Can do most parts of the task. Needs help only on hardest parts. Demonstrates partial understanding of the competency and/or critical objective. May not meet all job-entry level requirements for speed and accuracy. Needs close supervision.
- 1- **Limited:** Can do simple parts of task. Needs to be told or shown how to do most of task. Demonstrates a little understanding of the competency and/or critical objective. Needs extremely close supervision.
- 0- Cannot perform any part of task at a level sufficient for participation in a work environment. Demonstrates no understanding of the competency and/or critical objective.

#### APPLIED MATHEMATICS APLED 112 COMPETENCIES

			COMPETENCY	4	3	2	1	0
			<b>UNIT A - Getting to Know Your Calculator</b>					
			<ul style="list-style-type: none"> <li>• Enter numbers, fractions, and decimals into a calculator and read the output displayed by a calculator.</li> <li>• Add, subtract, multiply, and divide fractions with a calculator.</li> <li>• Add, subtract, multiply and divide mixed numbers with a calculator.</li> <li>• Add, subtract, multiply, and divide decimals with a calculator.</li> </ul>					
			<b>UNIT B - Naming Numbers in Different Ways</b>					
			<ul style="list-style-type: none"> <li>• Change percents to decimals</li> <li>• Change decimals to percents.</li> <li>• Use a calculator to change fractions to decimals.</li> <li>• Change decimals from your calculator to fractions.</li> <li>• Solve problems that contain information in the form of fractions, decimals, or percents.</li> <li>•</li> </ul>					

			<b>COMPETENCY</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>
			<b>UNIT C - Finding Answers with Your Calculator</b>					
			<ul style="list-style-type: none"> <li>• Read the problem and begin to understand the situation.</li> <li>• Figure out what the problem is asking you to find.</li> <li>• Decide what math operations (+, -, x, ÷) to do as you solve a problem.</li> <li>• Use your calculator to work problems that have more than one step.</li> </ul>					
			<b>UNIT 1 - Learning Problem-solving Techniques</b>					
			<ul style="list-style-type: none"> <li>• Read a problem and decide what is given and what is to be found.</li> <li>• Develop a plan for solving the problem.</li> <li>• Carry out your plan to solve the problem.</li> <li>• Check the answer and decide if it is reasonable.</li> </ul>					
			<b>UNIT 2 - Estimating Answers</b>					
			<ul style="list-style-type: none"> <li>• Make rough estimates.</li> <li>• Round and truncate whole numbers to a given number of digits.</li> <li>• Round and truncate decimal numbers to a given number of digits.</li> <li>• Estimate answers to problems that involve several steps.</li> <li>• Check the answers to problems to make sure that they are reasonable.</li> </ul>					
			<b>UNIT 3 - Measuring in English and Metric Units</b>					
			<ul style="list-style-type: none"> <li>• Use the common measurement units for length, area, volume, capacity, and weight in the English system.</li> <li>• Use the common measurement units for length, area, volume, capacity and weight in the metric system.</li> <li>• Convert measurement units from one form to another and carry out calculations that involve various measurement units.</li> <li>• Read measurements taken with common measuring tools.</li> <li>• Use tools to measure quantities and solve problems that involve these measurements.</li> </ul>					
			<b>UNIT 4 - Using Graphs, Charts and Tables</b>					
			<ul style="list-style-type: none"> <li>• Read tables.</li> <li>• Read and draw bar graphs.</li> <li>• Read circle graphs.</li> <li>• Read and draw line graphs.</li> </ul>					
			<b>UNIT 5 - Dealing with Data</b>					
			<ul style="list-style-type: none"> <li>• Recognize a problem that needs more data, and find a source for that data.</li> <li>• Collect the data you need to solve a problem.</li> <li>• Organize the data to help you solve the problem.</li> <li>• Interpret or use the data so you can solve the problem.</li> </ul>					

			<b>COMPETENCY</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>
			<b>UNIT 6 - Working with Lines and Angles</b>					
			<ul style="list-style-type: none"> <li>• Name the different parts of lines, angles, and circles.</li> <li>• Recognize parallel and perpendicular lines.</li> <li>• Draw lines, angles, and circles.</li> <li>• Draw lines and angles to produce parallel and perpendicular lines.</li> <li>• Use geometric figures to solve work-related problems.</li> </ul>					
			<b>UNIT 7 - Working with Shapes in Two Dimensions</b>					
			<ul style="list-style-type: none"> <li>• Identify common figures (such as rectangles, squares, triangles, parallelograms, trapezoids, and circles) within objects.</li> <li>• Calculate the perimeter and area of common figures.</li> <li>• Calculate the circumference and area of circles.</li> <li>• Solve work-related problems that involve common figures.</li> </ul>					
			<b>UNIT 8 - Working with Shapes in Three Dimensions</b>					
			<ul style="list-style-type: none"> <li>• Identify cylinders, rectangular solids, cones, and spheres.</li> <li>• Calculate surface area and volume for cylinders, rectangular solids, cones, and spheres.</li> <li>• Solve problems that involve cylinders, rectangular solids, cones, and spheres.</li> </ul>					
			<b>UNIT 9 - Using Ratios and Proportions</b>					
			<ul style="list-style-type: none"> <li>• Read and interpret ratios.</li> <li>• Compare ratios.</li> <li>• Recognize and write proportions from given information.</li> <li>• Distinguish between direct and indirect relationships.</li> <li>• Solve proportions in practical, work-related problems.</li> </ul>					
			<b>UNIT 10 - Working with Scale Drawings</b>					
			<ul style="list-style-type: none"> <li>• Read and use the scale of a drawing.</li> <li>• Find the dimensions of an object from a scale drawing.</li> <li>• Find distances and directions on land maps.</li> <li>• Make simple scale drawings.</li> </ul>					
			<b>UNIT 11 - Using Signed Numbers and Vectors</b>					
			<ul style="list-style-type: none"> <li>• Identify signed numbers.</li> <li>• Find the absolute value of signed numbers.</li> <li>• Combine signed numbers.</li> <li>• Find the magnitude and direction of a vector.</li> <li>• Solve problems using signed numbers and vectors.</li> </ul>					
			<b>UNIT 12 – Using Scientific Notation</b>					
			<ul style="list-style-type: none"> <li>• Powers of Ten</li> <li>• Writing Numbers in Power-of-ten Notation</li> <li>• Writing Numbers in Scientific Notation</li> <li>• Using Scientific Notation with Your Calculator</li> <li>• Combining Numbers in Scientific Notation</li> <li>• Converting Metric Measurements</li> </ul>					