

**CTE DUAL CREDIT ARTICULATION AGREEMENT 2023- 2026**

**College Program:** Electronics

**Career Cluster:** STEM

**North Seattle College / Seattle Public Schools**

The purpose of this agreement is to grant North Seattle 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 North Seattle College **Electronics** course(s) has(have) been approved for CTE Dual Credit articulation with Seattle Public Schools courses as listed below:

<b>High School Courses</b>	<b>College Courses</b>	<b>College Credits</b>
Digital Electronics 1 & 2  (2 semester/ 1 year)	EET 106 Introduction to Soldering	1 credit
	EET 170 Digital Electronics & PLCs I	5 credits

**Student Articulation Procedure**

1. Be enrolled in the required high school class.
2. Register for CTE 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. Satisfy all learning outcomes and objectives identified on college course outline (*see attached college course outline*).

**High School Instructors**

1. Ensure that the high school course syllabus includes information about CTE Dual Credit, 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 college course outline*).
3. Submit final grades for all students registered to earn CTE Dual Credit by the published deadline.
4. Attend scheduled meetings, workshops or professional development activities that enhance the high school/college partnership & support implementation of the CTE Dual Credit articulated program.

## **ARTICULATION AGREEMENT LEARNING OUTCOMES CHECKLIST**

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**The following college course outcomes must be satisfied in the related high school course to meet the standards of the articulation agreement (80% at minimum):**

### **COURSE OUTCOMES\*:**

#### **EET 106 – Introduction to Soldering, 1 credit**

- Demonstrate safety techniques and procedures while performing a soldering task
- Demonstrate the skills learned to make acceptable solder connections, identify cold solder joints, maintain high quality workmanship and prepare work for inspection.
- Demonstrate procedures for inspecting solder work to ensure compliance to set standards.

*\*Master Course Outline, version 06/10/15*

### **COURSE OUTCOMES\*:**

#### **EET 170 – Digital Electronics & PLCs I, 5 credits**

- Identify digital systems and define terms related to digital electronics.
- Set up, operate, and apply electronics test instruments, e.g., DMMs, oscilloscopes, power supplies, function generators, and simulation software.
- Manipulate numbers in different bases, including conversion between bases.
- Identify various logic symbols and covert logic expressions between equations, truth tables, timing diagrams, Karnaugh maps, and circuit diagrams.
- Simplify logic expressions using Boolean algebra, DeMorgan's theorems, and Karnaugh maps.
- Identify and explain the operation of various interfacing circuits, including encoders, decoders, multiplexers, and demultiplexers.
- Identify and explain the operation of basic types of flip-flops.
- Demonstrate an understanding of basic programmable logic controller (PLC) operation and application, including ladder logic.

*\*Master Course Outline, version 08/13/15*