

# Minnesota

## Articulated College Credit Agreement

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### Articulated College Credit (ACC) Agreement

Through Articulated College Credit (ACC), specific college curriculum learning outcomes and assessments are embedded in participating high school career and technical education (CTE) programs as specified in this agreement. Relevant knowledge, skills, and standards are taught by qualified CTE high school instructor(s) in one or more course. ACC is awarded if the student meets the college equivalency standards and later enrolls in the college(s) listed below requiring the course in a specific program. In some cases, credit toward electives is also an option.

**Agreement Name: Machine Technology – General Tool & Safety**

**Agreement Reviewed/Revised: 2023 - 2024**

**These credits are valid for students in grades 9-12 for 5 years from the completion of this course.**

College	College Course	College Programs	Articulated College Credit
Hennepin Technical College	WLDG 1135 – Gas Metal Arc Welding I	* Tool & Die Moldmaking (A.A.S. – 72 cr.; Diploma – 64 cr.) *Computer Numerical Control (CNC) Technician (A.A.S. – 72 cr.; Diploma – 64 cr.)	Elective credits - 2 credits of 3 total credits

### Course Description

Students will explain and demonstrate safety procedures in oxy-acetylene cutting, heating, and gas welding procedures on metal. Students will be introduced to using the MIG welding processes, requirements for metal joining processes and their application as applicable to Welding

### Curriculum Learning Outcomes

100% of the curriculum learning outcomes will be covered in the high school course(s) by qualified CTE high school instructor(s).

The following outcomes will be addressed in the course:

1. Utilize safe working techniques and practices.
2. Set-up welding and cutting equipment.
3. Operate welding and cutting equipment.
4. Produce welds with the Gas Metal Arc Welding Process in steel.

## Curriculum Learning Outcomes (Cont.)

5. Produce welds with the Flux Cored Arc Welding process in steel.
6. Produce welds with the Flux Cored Arc Welding process in steel.
7. Produce welds with the Shielded Metal Arc Welding process in steel.
8. Produce welds with the Gas Tungsten Arc Welding process in steel, stainless steel, and aluminum.
9. Interpret blueprints and welding symbols.
10. Preform basic lay-outs on various materials.
11. Apply metallurgical principles to welding and fabrication processes.
12. Determine the quality of welds.
13. Identify steps and procedures in the Flux Cored Arc Welding process.
14. Identify steps and procedures in the Shielded Metal Arc Welding process.
15. Identify steps and procedures in the Gas Metal Arc Welding process.
16. Identify steps and procedures in Gas Tungsten Arc Welding process.

## Reference Textbook

Please go to [www.hennepintech.edu](http://www.hennepintech.edu) for the most recent text.

## Course Assessments

\*A score of **80% or better** is required to qualify for Articulated College Credit.

### Recommended Industry-Recognized Certification or Comprehensive Assessment – High School & College

Certification/ Assessment	Vendor	Other Information
SP-2 Welding	SP-2	<a href="http://www.sp2.org">www.sp2.org</a>
Practical Knowledge of Safety & Health of Welders	AWS SENSE	<a href="http://www.aws.org">www.aws.org</a>