

July 2019

Pennsylvania College of Technology Welding and Fabrication Technology (BWE) and Washtenaw Community College Welding, A.A.S.:

This articulation program is being revised. Please contact the Welding Department for more information.

ARTICULATION AGREEMENT

between

Washtenaw Community College
Welding, A.A.S.
and

Pennsylvania College of Technology
Welding and Fabrication Technology (BWE)

I. PURPOSE

This agreement establishes a mechanism for graduates of the Welding (A.A.S.) at Washtenaw Community College to transfer specific earned credits into the Bachelor of Science in Welding and Fabrication and Engineering Technology at Pennsylvania College of Technology.

II. GOALS

- A. To provide a well-defined mechanism for graduates of the Welding Major (A.A.S.) at Washtenaw Community College to begin the B.S. in Welding and Fabrication Technology at the appropriate entry point.
- B. To recruit associate-degree graduates whose career goals include acquisition of a baccalaureate degree.

III. TRANSFER/ENROLLMENT REQUIREMENTS

Pennsylvania College of Technology will accept Washtenaw Community College graduates into the Welding and Fabrication Technology major if they meet the following requirements and adhere to the Admission Procedures (Part V).

- A. Washtenaw Community College applicants must have a final cumulative GPA of 2.0 (on a 4.0 scale) or higher.
- B. Washtenaw Community College applicants must have completed the individual courses to be transferred (see Part IV) with grades of C (2.0) or higher.
- C. Complete a minimum of 36 credits at Penn College for coursework prescribed in the final four semesters of the student's profile. In evaluating credits from another college/university, Penn College will only consider those credits earned through course work taken at that institution, not credits that the institution has granted through transfer or credit-by exam.

IV. ARTICULATED COURSES

For those who meet the Transfer Requirements (Part III), the following course equivalencies apply:

General Education Courses

| Washtenaw CC | | Penn College | |
|--|------------|---|------------|
| Course # and Title | Credits | Course # and Title | Credits |
| MATH 176 College Algebra* | 4 | MTH180 College Algebra and Trig | 3 |
| Speech elective: PCT recommends COM 101 Fundamentals of Speaking | 3 | SPC 101 Fundamentals of Speech | 3 |
| Arts and Humanities elective | 3 | Students are encouraged to use the Transfer Course Equivalency tool to search for equivalencies for HUM or ART elective. | 3 |
| Computer and Information Literacy PCT recommends: CIS100 Intro to Computer & Software App | 3 | Fulfills degree requirement: CSC 124 Information, Technology, and Society | 3 |
| Social and Behavioral Sciences Elective PSY 100 Introduction to Psychology SOC 100 Principles of Sociology | 3 | Students are encouraged to use the Transfer Course Equivalency tool and search for SSE Elective. Courses on left will transfer to fulfill a SSE Elective, but other courses are available for transfer. | 3 |
| Natural Sciences Elective Penn College recommends PHS 111 | 4 | Fulfills degree requirement PHS 115 College Physics I | 4 |
| Writing Elective: Penn College recommends ENG 111 | 3 | Fulfills degree requirement: ENL111 | 3 |
| | 23 credits | | 22 credits |

*Students are encouraged to complete MTH 176, College Algebra at Washtenaw CC. This allows the student to remain in sequence and complete the Penn College program in 4 additional semesters.

Additional course-specific recommendations or stipulations:

- Washtenaw CC students are encouraged to use the [Transfer Course Equivalency](#) for a complete listing of general education courses that will transfer to Penn College and satisfy general education
- Washtenaw Community College A.A.S. degree will be applied to the Welding and Fabrication Engineering Technology degree according to the framework in Appendix A.

Optional Additional Courses that can be completed at either college

| Washtenaw CC | | Penn College | |
|-----------------------------------|---------|---|---------|
| Course # and Title | Credits | Course # and Title | Credits |
| ENG 107 Technical Writing | 3 | ENL 201 Technical and Professional Communication | 3 |
| MTH178 General Trig | 4 | MTH 182 College Algebra and Trig II | 3 |
| MTH160 Basic Statistics | 4 | MTH 160 Elem Stats w/Computer Applications (see note below) | 4 |
| OR MTH 191 Calculus I | or 5 | MTH 240 Calculus I (May be used to replace MTH 230) | 4 |
| Art Elective | 3-4 | Art Elective | 3 |
| Humanities, Social Science or Art | 3-4 | HUM/SSE/ART/FOR/ AAE/IFE | 3 |
| | 17-20 | | 16 |

Notes for additional courses:

- Students may complete MTH160 at Washtenaw CC to fulfill PCT's MTH160. However, upon enrollment, student must complete MTH299 (1 cr) to fulfill all competencies in PCT's MTH 160.
- **OR** Students may complete MTH191, as it is equivalent to MTH 240. A MTH240 equivalency will cover MTH230 and student can then enroll in additional-upper level courses if interested.

A.A.S. Degree Major-Specific Courses :

| Washtenaw CC | | Penn College | |
|---|----------------|--|----------------|
| Course # and Title | Credits | Course # and Title | Credits |
| WAF 105 Introduction to Welding Processes | 2 | WEL113 Oxy-Fuel Welding and Cutting I | 2 |
| WAF 111 Oxy-Fuel Welding | 4 | and | |
| WAF 123 Advanced Oxy-Fuel Welding | 4 | WEL115 Oxy-Fuel Welding and Cutting II | 2 |
| WAF 112 Shielded Metal Arc Welding | 4 | WEL 114 Shielded Metal Arc I | 2 |
| WAF 106 Blueprint Reading for Welders | 3 | WEL 116 Shielded Metal Arc II | 2 |
| WAF 124 Advanced Shielded Metal Arc Welding | 4 | WEL102 Welding Blueprint and Layout | 3 |
| WAF 215 Advanced Gas Tungsten Arc Welding | 4 | WEL 230 Shielded Metal Arc III | 2 |
| WAF 288 Gas Metal Arc Welding | 4 | WEL 234 Shielded Metal Arc V | 2 |
| WAF 200 Layout Theory Welding | 3 | WEL 123 Gas Tungsten Arc I | 2 |
| WAF 210 Welding Metallurgy | 3 | WEL 129 Gas Tungsten Arc II | 2 |
| WAF 226 Specialized Welding Procedures | 4 | WEL 120 Gas Metal Arc I | 2 |
| WAF 227 Basic Fabrication | 3 | WEL 124 Gas Metal Arc II | 2 |
| WAF 229 Shape Cutter Operations | 3 | Open Transfer Elective | 3 |
| See note below* | | MSC 106 Introduction to Metallurgy | 4 |
| | | OPN 2004 Open Transfer Elective | 4 |
| | | OPN2003 Open Transfer Elective | 3 |
| | | WEL 240 Basic CNC Programming | 3 |
| | | SAF 110 Occupational Health & Safety | 2 |
| Total Credits | 45 | Total Credits | 42* |

*Students may complete the 30 hour OSHA online course. Upon completion, student may submit documentation to receive credit for SAF 110.

Additional course-specific recommendations or stipulations:

The above includes 10 credits of Open Transfer Elective. It should be noted that 6 credits will be applied to satisfy graduation requirements at Penn College.

Total Possible Transfer Credits:

| Washtenaw CC | | Penn College | |
|--|----------------|---|----------------|
| Course # and Title | Credits | Course # and Title | Credits |
| General Education | 23 | General Education | 22 |
| AAS Degree major-specific courses | 45 | AAS Degree major-specific courses | 42 |
| Optional Additional Courses | 17-20 | | 16 |
| Total Transfer Credits Possible | 85-88 | Total Transfer Credits Possible | 80 |
| | | Pennsylvania College of Technology Required Courses | 57 |
| | | | 137 |

V. ADMISSION PROCEDURES

- A. Applicant must provide an **official** transcript of all college course work.
- B. The application fee will be waived if a paper application is submitted and this agreement noted. Application fees are also waived if application is submitted electronically during an Open House visit or by attending an official campus visit. Applications submitted online will require a \$50 nonrefundable fee.

Appendix A

| Welding Technology | | Welding and Fabrication Engineering | |
|----------------------------------|---------|---|---------|
| Washtenaw CC (A.A.S) | Credits | Penn College - (B.S) | Credits |
| | | 1st Semester | |
| Fulfilled through transfer | | FYE101 First Year Experience | 1 |
| Fulfilled through A.A.S . degree | | WEL113 Oxy-Fuel Welding and Cutting I | 2 |
| Fulfilled through A.A.S . degree | | WEL114 Shielding Metal Arc I | 2 |
| Fulfilled through A.A.S . degree | | WEL115 Oxy-Fuel Welding & Cutting II | 2 |
| Fulfilled through A.A.S . degree | | WEL116 Shielded Metal Arc II | 2 |
| May be fulfilled with 30 hr OSHA | | SAF110 Occupational Health & Safety | 2 |
| Fulfilled through A.A.S . degree | | WEL102 Welding Blueprint & Layout | 3 |
| MTH 176 College Algebra | 3 | MTH180 College Algebra & Trigonometry I | 3 |
| | | TOTAL CREDITS | 17 |
| | | 2nd Semester | |
| Fulfilled through A.A.S . degree | | WEL120 Gas Metal Arc I | 2 |
| Fulfilled through A.A.S . degree | | WEL123 Gas Tungsten Arc I | 2 |
| Fulfilled through A.A.S . degree | | WEL124 Gas Metal Arc II | 2 |
| Fulfilled through A.A.S . degree | | WEL129 Gas Tungsten Arc II | 2 |
| CIS 100 recommended | 3 | CSC124 Information, Technology & Society | 3 |
| ENG 111 recommended | 3 | ENL111 English Composition I | 3 |
| (option available at WCC) | | MTH182 College Algebra & Trig II | 3 |
| | | FIT Fitness & Lifetime Sports Elective | 1 |
| | | TOTAL CREDITS | 18 |
| | | 3rd Semester | |
| | | WEL210 Flux Cored & Sub- Arc I | 2 |
| Fulfilled through A.A.S . degree | | WEL230 Shielded Metal Arc III | 2 |
| | | WEL214 Flux Cored & Sub Arc II | 2 |
| Fulfilled through A.A.S . degree | | WEL234 Shielded Metal Arc V | 2 |
| Fulfilled through A.A.S . degree | | WEL240 Basic CNC Programming | 3 |
| (option available at WCC) | | ENL201 Technical & Professional Comm | 3 |
| (option available at WCC) | | MTH160 Elementary Stats/Comp Apps | 4 |
| | | OR MTH230 Applied Calculus | 3 |
| | | TOTAL CREDITS | 18 |
| | | 4th Semester | |
| | | WEL213 Gas Tungsten Arc III | 2 |
| | | WEL233 Shielded Metal Arc IV | 2 |
| | | WEL219 Gas Tungsten Arc IV | 2 |
| | | WEL239 Shielded Metal Arc VI Pipe Wel | 2 |
| | | WEL248 Robotic Welding | 3 |
| | | QAL237 Non-Destructive Testing I | 3 |
| Fulfilled through A.A.S . degree | | MSC106 Introduction to Metallurgy | 4 |

| | | | |
|-------------------------------------|---|--|----|
| | | 5th Semester | |
| COM 101 recommended | 3 | SPC101 Fundamentals of Speech | 3 |
| | | QAL301 NDT Quality Assurance | 3 |
| | | CET230 Statics | 3 |
| PHS 111 recommended | 4 | PHS115 College Physics I | 4 |
| | | HIS115 World Civilization I | 3 |
| | | or | |
| | | HIS125 World Civilization II | 3 |
| | | TOTAL CREDITS | 16 |
| | | 6th Semester | |
| | | WEL301 Industrial Processes | 3 |
| | | CET243 Strength of Materials | 3 |
| | | MET311 Computer Solutions of Engineering Problems | 3 |
| | | MET321 Engineering Ethics & Legal Issues | 3 |
| | | FIT Fitness & Lifetime Sports Elective | 1 |
| WAF 226 | | OEA Open Elective/Associate | 3 |
| | | TOTAL CREDITS | 16 |
| | | 7th Semester | |
| | | WEL410 Industrial Weld Design | 3 |
| | | WEL400 Fabrication of Alloys | 3 |
| | | MET495 Senior Seminar-Lecture | 1 |
| | | EET302 Industrial Electronics & Applications | 3 |
| If Humanities Elective taken | | HUM Humanities Elective | 3 |
| Social and Behavioral Sciences Elec | 3 | SSE Social Science Elective | 3 |
| | | TOTAL CREDITS | 16 |
| | | 8th Semester | |
| | | WEL420 Welding Codes & Procedures | 3 |
| | | MET496 Senior Seminar-Lab | 3 |
| (option available at WCC) | | HUM/SSE/ART/FOR/AAE/IFE Elective | 3 |
| If ART elective taken | | Art Art Elective | 3 |
| WAF 227 | 3 | OEA Open Elective/Associate | 3 |
| | | TOTAL CREDITS | 15 |

Semester Layout for BWE Coursework:

| Semester 1 | | Semester 2 | |
|---------------------------|----------------|---------------------------|----------------|
| Course # and Title | Credits | Course # and Title | Credits |
| WEL 210 | 2 | WEL 213 | 2 |
| WEL 214 | 2 | WEL 233 | 2 |
| CET 230 | 3 | WEL 219 | 2 |
| EET 302 | 3 | WEL 239 | 2 |
| HIS 115 or HIS 125 | 3 | WEL 248 | 3 |
| MTH 299* | 1 | QAL 237 | 3 |
| SEMESTER TOTAL | 13-14 | WEL 301 | 3 |
| | | SEMESTER TOTAL | 17 |
| | | | |
| Semester 3 | | Semester 4 | |
| QAL 301 | 3 | CET 243 | 3 |
| WEL 410 | 3 | MET 311 | 3 |
| WEL 400 | 3 | MET 321 | 3 |
| MET 495 | 1 | WEL 420 | 3 |
| FIT | 2 | MET 496 | 3 |
| SEMESTER TOTAL | 12 | SEMESTER TOTAL | 15 |
| | | | |

*Required for students that completed MTH160 at WCC

This chart is for planning purposes only. Students who did not complete optional additional courses at WCC, as described on page 3, must complete the courses at Penn College, requiring students to schedule up to 16 additional credit hours. Students should understand the impact of credit loads.

- Students must be full-time (12 credits) at Penn College to reside in the on-campus residence halls.
- Students should understand the credit loads may impact financial aid. Students are encouraged to consult with the financial aid office for clarification.
- Student must complete a minimum of 36 credits at Penn College.