



# Atlantic Technical College

## Welding Technologies

### Program Syllabus

#### 2017-2018



<b>Instructor Name:</b> Mr. Frank Rose <b>Department Name:</b> Technical Trades Department <b>Office/Classroom Location:</b> Building 15, Room 263 <b>Phone Number:</b> (754) 321-5125. <b>Email Address:</b> frank.rose@browardschools.com	<b>Instructor Office Hours:</b> <b>M-F: 1:50 PM - 3:50 PM</b> (by appointment only)
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<b>Student Hours:</b> <b>Monday – Friday</b> <b>7:05 AM to 10:05 AM</b> (Adults & High School)  <b>Lunch: 10:05 AM to 10:50 AM</b>  <b>10:50 AM to 1:50 PM</b> (Adults & High School)  <b>NOTE:</b> All students are expected to be present during the time listed on the registration form or the entire scheduled class time(s). All classroom breaks will occur on an “as needed” basis. The Cell phone will serve as the official time.  Additionally, all students are required to notify the Teacher when <b>leaving</b> the class for <b>any reason</b> and must sign out on the Sign Out Sheet or the student will be mark absent for the time missing.	<b>Program Name:</b> Welding Technology PSAV <b>Career Cluster:</b> Manufacturing																
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">OCPs</th> <th style="width: 60%;">Course Number / Title</th> <th style="width: 30%;">Course Length</th> </tr> </thead> <tbody> <tr> <td rowspan="2" style="text-align: center; vertical-align: middle;">A</td> <td>PMT0070 / Welder Assistant 1</td> <td style="text-align: center;">150 hours</td> </tr> <tr> <td>PMT0071 / Welder Assistant 2</td> <td style="text-align: center;">150 hours</td> </tr> <tr> <td rowspan="2" style="text-align: center; vertical-align: middle;">B</td> <td>PMT0072 / Welder, SMAW 1</td> <td style="text-align: center;">150 hours</td> </tr> <tr> <td>PMT0073 / Welder, SMAW</td> <td style="text-align: center;">150 hours</td> </tr> <tr> <td style="text-align: center; vertical-align: middle;">C</td> <td>PMT0074 / Welder</td> <td style="text-align: center;"> <u>450 hours</u>   <b>1050 hours total</b>            (full-time, including summer)         </td> </tr> </tbody> </table>	OCPs	Course Number / Title	Course Length	A	PMT0070 / Welder Assistant 1	150 hours	PMT0071 / Welder Assistant 2	150 hours	B	PMT0072 / Welder, SMAW 1	150 hours	PMT0073 / Welder, SMAW	150 hours	C	PMT0074 / Welder	<u>450 hours</u>  <b>1050 hours total</b> (full-time, including summer)
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**College Policy/Adult Student Attendance:**

- A student must be withdrawn after being absent for six (6) consecutive days.
- Two (2) additional absences may be allowed under certain circumstance with appropriate documentation.
- Please refer to the Broward Technical College Student Handbook for postsecondary students.  
<http://www.atlanticechnicalcollege.edu/atc-student-handbook/>

**Dual Enrollment/Magnet High School/Attendance Policy:**

A student who has had at least five unexcused absences, or absences for which the reasons are unknown, within a calendar month, or 10 unexcused absences, or absences for which the reasons are unknown, within a 90-calendar-day period, may be exhibiting a pattern of non-attendance (F.S.1003.26 (1) (b)) and the School Board of Broward County, Policy 5.5.

**Required Books and Supplies  
(available at Campus Bookstore):**

1. Blueprint Reading for Welders, 9th Edition
2. (ISBN-13 #:978-1-133-60578-2) \$115.90 plus tax for the 2016 - 2017 school year
3. On Line Course: Tooling-U.com, Student(s) will purchase a 365 days subscription, in the Bookstore. Price is \$234.24 plus tax. If you don't complete the online course work on time and the subscription runs out you will be required to repurchase it to complete the required online course work.
4. One – 1", 3-Ring Hard Cover Binder (8.5" x 11" with White Bond Paper)
5. Scientific Calculator
6. USB Drive / 8 GB

**Required Tools / Retail Supplies  
(Some items are available at ATC Bookstore):**

1. Welding Shield with a #10 or #11 lens, with extra clear plastic (Huntsman 451 recommended)
  2. \* Approved A.N.S.I. Z87 Clear Safety Glasses
  3. \* Welding gloves (thick, Insulated for stick welding)
  4. \* Canvas jacket with leather sleeves. (sized to fit)
  5. \* Chipping hammer
  6. \* 6" inch wire brush
  7. \* Cutting Goggles or (approved A.N.S.I. Z87 Cutting Safety glasses with a #5 Lens (not part of the kit)
  8. \* Flint Striker
  9. \* Tip Cleaner
  - 10.\* TIG welding gloves
  - 11.\* Soap stone (used for marking metal during cutting)
  12. Tape Measure 25ft
  13. Wire Cutters
  14. 10" Vise Grips
  15. 10" Adjustable Wrench.
- \* Items included in the Tillman Premium Protection Kit
- Items below must be purchased by H.S. students**
16. Ear Plugs
  17. Cotton welding hat (no synthetic materials)
  18. Leather work boots (must be above the ankle  
Steel Toe is preferred)
  19. Two locks for lockers with 2 keys or  
2 combination locks
  20. Work clothing (100% cotton or wool or blend of both)

**ADULT STUDENTS:** All required books & some materials/supplies can be purchased from the school bookstore. Stop by during operational hours for pricing & purchasing information. All other required materials/retail supplies not available at the bookstore need to be purchased elsewhere. All required books and required materials/retail supplies need to be obtained prior to the start of the program.

**HIGH SCHOOL STUDENTS:** Students receive a required book will be issued one, if lost or missed placed the student will have to replace it at their own expense. Most of the required tools/supplies are on loan, high school students are responsible for the care and return of all of the required books and required tools/supplies on loan and will be issued an obligation for damaged or missing books and/or tools/supplies. Some of the required materials/supplies can be purchased from the school bookstore. All other required materials/retail supplies not available at the bookstore need to be purchased elsewhere.

<p><b>Grading System:</b></p> <p>A 90 - 100%</p> <p>B 80 - 89%</p> <p>C 70 - 79%</p> <p>D 60 - 69%</p> <p>F 0 - 59%</p> <p>I Incomplete</p>	<p><b>Additional Program Specific Grading Information:</b></p> <p><u>Evaluations / Grading</u></p> <p>Welding student(s) will receive a weekly grade determined by the number of days during the work week, as well as their performance in the classroom and or lab, throughout the week (see below). Examples of class/lab performance include: attendance, starting and completing class assignments or lab tasks on time, remaining on task, participating in cleanup, etc.) Any days after the first tardy, five points will be deducted per tardy. There will be a loss of five points each day your note book is not in class.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th><u>Days per week</u></th> <th><u>Possible pts./day</u></th> <th><u>Possible pts./week</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">5</td> <td style="text-align: center;">20</td> <td style="text-align: center;">100</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">25</td> <td style="text-align: center;">100</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">33</td> <td style="text-align: center;">99</td> </tr> </tbody> </table> <p>* All lab work should be presented to the teacher (good, bad or ugly) for review.</p>	<u>Days per week</u>	<u>Possible pts./day</u>	<u>Possible pts./week</u>	5	20	100	4	25	100	3	33	99
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**View Your Grades online:**  
**Grades can be viewed online by following the directions below:**

1. Go to <https://browardfocus.com> (access FOCUS using Chrome, Firefox or Safari)
2. Student ID which is on your student schedule.
3. Passcode: Student’s date of birth formatted as YYYYMMDD.  
*Four digits for the year, two digits for the month and two digits for the day.*

**Welding program class room / lab rules:**  
 The following rules must be complied with student(s) in the welding program to prevent hazardous conditions.

1. Students are expected to be in their seats and ready to work when the bell rings.

2. Students are required to adhere to the Code of Conduct at all times, as set forth by the School Administration and the Broward Technical College Student Handbook. No sleeveless shirts will be worn at any time.
3. Students are to show respect to other students and the teacher at all times.
4. Good manners are necessary for a pleasant classroom environment. Please raise your hand to be recognized. Do not speak when someone else is speaking. Rudeness, bullying or disruptive behavior will NOT be tolerated.
5. Students are responsible to keep their personal belongings with them at all times.
6. All electronic devices must be silent and out of sight during instructional time. This includes cell phones, headphones, mp3 players, etc. The school and/or teacher are not responsible for lost or stolen devices/personal belongings of any kind.
7. Computer use is to complete required assignments / classwork and will obtain permission before use.
8. Log off of computer & turn off monitor before leaving class each day (except on Thursdays, when Updates occur).
9. No food and/or drinks are permitted around any computers.
10. Chairs will be placed on the tables in class room at the end of class.
11. Remain seated, when the bell rings, until you are dismissed.
12. Students must notify teacher, in advance, if planning to miss a portion of class time(s) for ANY reason.
13. Students shall familiarize themselves and adhere to all safety procedures in Classroom Safety Manual and Lab.
14. No student should work in or enter the lab until they have had a lab orientation.
15. Student(s) must not operate any piece of equipment until they have been trained and have been authorized to operate it.
16. Wear approved A.N.S.I. Z87 safety glasses in the lab at **all times. No Exceptions!** NO SUNGLASSES in classroom and or lab at any time.
17. Shirt or any loose clothing must be tucked in or tied out of the way of hazards.
18. A face shield must be worn when operating a hand grinder, power wire brush, bench grinder, belt sander, or any power tool.
19. Long hair must be tied back out of the way of any hazards.
20. No jewelry is to be worn in the lab at any time.
21. General work clothing used in the lab must be 100% cotton or wool, 100% cotton hat or blend of the above. (Refer to Chapter 2 in the welding textbook or Tooling-U, Per. Protect Equip. 120 (PPE 120)).
22. Special protective clothing must be worn during the welding operation, proper hand, body waist and lap, arm protection and etc. are required to be use during the above operation(s).
23. Boots (read chapter 2 in the welding textbook or Tooling-U, PPE 120).
24. No matches or cigarette lighters in the lab area or on your body at any time.
25. Student(s) will not talk or interrupt other students while welding or operating equipment, you must wait for the operator to stop operating the equipment first.
26. No liquids will be placed on any devise that contain electric, welding machines, electrical boxes, etc.
27. No smoking on ATC's campus of any kind, at any time.

**Lab Clean-up will consisted of:**

28. Return all tool(s) and your electrode can, that were checked out, to the tool room each day.
29. Sweep off your work bench, the floor in the welding booth and under the welding machine. Roll up the welding cables and place them on the hook in the welding booth.
30. Remove all metal from the welding booth and place it in your metal locker or the scrap bin. If it is still hot, cool the hot metal first.
31. First, turn off the power to the welding machine.
32. Second, turn off the power at the electrical breaker box, outside the welding booth.
33. Return your welding equipment to your locker.
34. Return your chair to the top of the work bench.
35. Sweep your assigned lab area and dust off equipment in your area.

**NOTE: All the rules above must be followed by each student everyday (no exceptions).**

**Industry Credentials:**

American Welding Society Welding Certification.

Price for the A.W.S. Welding Certification(s),  
\$20 for steel plate each and \$30 for steel pipe  
each.

**Outstanding Student Recognition Information:**

A gold seal will be applied to a Program  
Completion Certificate or an Applied Technology  
Diploma if the student has earned a 3.5 GPA or  
higher in their Career and Technical Education  
(CTE) classes.

**Program Name:** Welding Technology

**Course Number:** PMT0070

**Course Title:** Welder Assistant 1

**Occupational Completion Point:** A

**Intended Outcomes:**

- 01.0 Demonstrate an understanding and apply workplace safety and workplace organization skills.
- 02.0 Demonstrate basic knowledge of industrial and manufacturing processes.
- 03.0 Describe and identify metal and their properties accurately.
- 04.0 Demonstrate basic knowledge of drawing and interpreting welding symbols.
- 05.0 Apply basic Oxyfuel gas cutting principles and practices.
- 06.0 Create a product using basic Oxyfuel gas cutting principles and practices.

**Course Number:** PMT0071

**Course Title:** Welder Assistant 2

**Occupational Completion Point:** A

**Intended Outcomes:**

- 07.0 Apply knowledge of drawing and interpreting welding symbols.
- 08.0 Apply intermediate Oxyfuel gas cutting principles and practices.
- 09.0 Demonstrate plasma arc cutting principles and practices.
- 10.0 Demonstrate a basic understanding of shielded metal arc welding (SMAW).
- 11.0 Create a product using basic shielded metal arc welding (SMAW) principles and practices.

**Course Number:** PMT0072

**Course Title:** Welder, SMAW 1

**Occupational Completion Point:** B

**Intended Outcomes:**

12.0 Apply basic shielded metal arc welding (SMAW) skills.

13.0 Demonstrate and apply Carbon Arc Gouging (GAC) principles and practices.

14.0 Apply visual examination skills.

15.0 Create a product using Carbon Arc Gouging and basic shielded metal arc welding (SMAW) principles and practices.

**Course Number:** PMT0073

**Course Title:** Welder, SMAW 2

**Occupational Completion Point:** B

**Intended Outcome:**

16.0 Demonstrate and understanding of employability skills and career opportunities related to the welding industry.

17.0 Apply intermediate shielded metal arc welding (SMAW) skills.

18.0 Create a product using intermediate shielded metal arc welding (SMAW) principles and practices.

**Course Number:** PMT0074

**Course Title:** Welder

**Occupational Completion Point:** C

**Intended Outcomes:**

19.0 Apply basic gas metal arc welding (GMAW) skills.

20.0 Apply intermediate gas metal arc welding (GMAW) skills.

21.0 Apply basic flux-cored arc welding (FCAW) skills.

22.0 Apply intermediate flux-cored arc welding (FCAW) skills.

23.0 Apply basic gas tungsten arc welding (GTAW) skills.

24.0 Apply intermediate basic gas tungsten arc welding (GTAW) skills.

The School Board of Broward County, Florida, prohibits any policy or procedure which results in discrimination on the basis of age, color, disability, gender identity, gender expression, national origin, marital status, race, religion, sex or sexual orientation. Individuals who wish to file a discrimination and/or harassment complaint may call the Director, Equal Education Opportunities/ADA Compliance Department at 754-321-2150 or Teletype Machine (TTY) 754-321-2158. Individuals with disabilities requesting accommodations under the Americans with Disabilities Act Amendments Act of 2008, (ADAAA) may call Equal Educational Opportunities/ADA Compliance Department at 754-321-2150 or Teletype Machine (TTY) 754-321-2158.