Kentucky CTE

Welding Technology: Shielded Metal Arc Welding (SMAW) and Lab

Practice and perform safe shop procedures at all times. SMAWL1	**1** Practice and perform safe shop procedures at all times. SMAWL1
Apply the technical math required for employment opportunities in welding. SMAWL2	**2** Apply the technical math required for employment opportunities in welding. SMAWL2
Perform all duties with SMAWL3	**a** integrity SMAWL3A **b** responsibility SMAWL3B **c** quality SMAWL3C **d** discipline SMAWL3D **e** teamwork SMAWL3E
Identify, select, and store SMAW electrodes. SMAWL4	**4** Identify, select, and store SMAW electrodes. SMAWL4
Apply principles of SMAW process to cut and weld metals. SMAWL5	**5** Apply principles of SMAW process to cut and weld metals. SMAWL5
Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe. SMAWL6	**6** Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe. SMAWL6

Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel. SMAWL7	**7** **Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel.** SMAWL7
Use shop equipment and tools SMAWL8	**8** **Use shop equipment and tools** SMAWL8
Interpret and apply tolerances. SMAWL9	**9** **Interpret and apply tolerances.** SMAWL9
Interpret and apply American Welding Society welding symbols. SMAWL10	**10** **Interpret and apply American Welding Society welding symbols.** SMAWL10
Draw shop sketches. SMAWL11	**11** **Draw shop sketches.** SMAWL11
Read and interpret blueprints. SMAWL12	**12** **Read and interpret blueprints.** SMAWL12
Interpret lines. SMAWL13	**13** **Interpret lines.** SMAWL13
Interpret views to include AWS (ISO symbols optional). SMAWL14	**14** **Interpret views to include AWS (ISO symbols optional).** SMAWL14
Interpret conventional and datum line dimensions. SMAWL15	**15** **Interpret conventional and datum line dimensions.** SMAWL15
Interpret and apply tolerances. SMAWL16	**16** **Interpret and apply tolerances.** SMAWL16
Interpret sectioning and section lines. SMAWL17	**17** **Interpret sectioning and section lines.** SMAWL17
Apply principles of oxy-fuel systems to cut, weld, braze, and braze-weld with oxy-fuel. SMAWL18	**18** **Apply principles of oxy-fuel systems to cut, weld, braze, and braze-weld with oxy-fuel.** SMAWL18

Apply principles of controlling distortion. SMAWL19	**19** **Apply principles of controlling distortion.** SMAWL19
Set up components of oxy-fuel equipment and setup procedures. SMAWL20	**20** **Set up components of oxy-fuel equipment and setup procedures.** SMAWL20
Apply oxy-fuel cutting applications and procedures. SMAWL21	**21** **Apply oxy-fuel cutting applications and procedures.** SMAWL21
Apply oxy-fuel welding applications and procedures. SMAWL22	**22** **Apply oxy-fuel welding applications and procedures.** SMAWL22
Apply brazing and braze welding principles and applications. SMAWL23	**23** **Apply brazing and braze welding principles and applications.** SMAWL23