



Mechanical Technology 2018-19 State Results

Statistics data includes students taking exams in the original testing period and includes students retaking exams. The Score Distribution and Standards performance tables show results for original testing period only for accurate evaluation of live testing performance.

Statistics

Categories	Performance
Participants	127
Pass Rate	56
Pass Percentage	44.1%
Average Score	65.5
Cut Score	71

Score Distribution

% Range	# Scores in Range
0-11	0
11-21	0
21-31	0
31-41	3
41-51	8
51-61	21
61-71	27
71-81	26
81-91	11
91-100	2

Mechanical Technology

1) Content Standard 1.0 Identify Lab Organization and Safety Procedures	72.48%
1) Performance Standard 1.1 : Demonstrate General Lab Safety Rules and Procedures	77.4%
1) 1.1.1 Describe general shop safety rules and procedures	75.51%
3) 1.1.3 Comply with the required use of personal protective equipment (PPE) during lab/shop activities	93.88%
4) 1.1.4 Utilize safe procedures for handling of tools and equipment	85.2%
5) 1.1.5 Operate lab equipment according to safety guidelines	73.98%
7) 1.1.7 Utilize proper ventilation procedures for working within the lab/shop area	96.94%
8) 1.1.8 Identify marked safety areas	91.84%
9) 1.1.9 Identify the location and the types of fire extinguishers and other fire safety equipment; demonstrate knowledge of the procedures for using fire extinguishers and other fire safety equipment	76.19%
10) 1.1.10 Identify the location and use of eye wash stations	98.98%
11) 1.1.11 Identify the location of the posted evacuation routes	86.73%
12) 1.1.12 Identify and wear appropriate clothing for lab/shop activities	34.69%
14) 1.1.14 Demonstrate knowledge of the safety aspects of high voltage circuits	42.35%
15) 1.1.15 Locate and interpret material safety data sheets (MSDS)	89.29%
17) 1.1.17 Perform housekeeping duties	83.67%
2) Performance Standard 1.2 : Identify and Utilize Hand Tools	79.42%
1) 1.2.1 Identify hand tools and their appropriate usage	82.45%
4) 1.2.4 Demonstrate safe handling and use of appropriate tools	64.29%
3) Performance Standard 1.3 : Identify and Utilize Power Tools and Equipment	49.15%
3) 1.3.3 Demonstrate the proper techniques when using power tools and equipment	40.82%
4) 1.3.4 Demonstrate safe handling and use of appropriate power tools and equipment	62.24%
5) 1.3.5 Demonstrate proper cleaning, storage, and maintenance of power tools and equipment	47.96%
2) Content Standard 2.0 Apply Fundamental Print Reading, Measuring, and Sketching Techniques	68.23%
1) Performance Standard 2.1 : Demonstrate Print Reading Practices	72.58%

1) 2.1.1 Interpret basic elements of a technical drawing (i.e. title block information, dimensions, line types)	56.12%
5) 2.1.5 Understand dimensioning, sectional drawings, fasteners, tables, charts, and assembly drawings	82.45%
2) Performance Standard 2.2 : Demonstrate Measuring and Scaling Techniques	63.27%
1) 2.2.1 Identify industry standard units of measure	75%
5) 2.2.5 Determine and apply the equivalence between fractions and decimals	64.8%
6) 2.2.6 Demonstrate proper use of precision measuring tools (i.e., micrometer, dial-indicator, dial-caliper)	33.67%
4) Content Standard 4.0 Apply Fundamental Power System Principles	60.63%
1) Performance Standard 4.1 : Identify Power Systems	58.67%
1) 4.1.1 Define terms used in power systems (e.g., power, work, horsepower, watts)	58.67%
2) Performance Standard 4.2 : Identify and Utilize Basic Mechanical Systems	76.53%
1) 4.2.1 Locate and explain examples of the six simple machines, their attributes and components	76.53%
4) Performance Standard 4.4 : Identify and Utilize Basic Fluid Systems	52.04%
1) 4.4.1 Define fluid systems (e.g., hydraulic, pneumatic, vacuum)	41.84%
6) 4.4.6 Discuss the safety concerns of working with liquids and gases under pressure	58.84%
5) Performance Standard 4.5 : Identify and Utilize Basic Electrical Systems	68.37%
1) 4.5.1 Define AC and DC electrical systems and terminology	60.71%
2) 4.5.2 Discuss the safety concerns of working with electricity	76.02%
5) Content Standard 5.0 Identify and Apply Manufacturing Processes	64.51%
3) Performance Standard 5.3 : Apply Manufacturing Processes	58.84%
1) 5.3.1 Demonstrate cutting methods of metals and plastics	58.84%
2) 5.3.2 Demonstrate drilling methods of metals and plastics	73.47%
3) 5.3.3 Demonstrate grinding methods of metals	51.53%
4) Performance Standard 5.4 : Identify Fasteners	66.33%
1) 5.4.1 Identify various fastening methods (e.g., rivets, welds, adhesive, screws, seams, etc.)	66.33%
5) Performance Standard 5.5 : Demonstrate Safe and Proper Techniques in Shielded Metal Arch Welding (SMAW)	81.12%
1) 5.5.1 Perform safety inspections of SMAW equipment and accessories	81.12%

6) Performance Standard 5.6 : Demonstrate Safe and Proper Techniques in Gas Metal Arch Welding (GMAW)	75.51%
1) 5.6.1 Perform safety inspections of GMAW equipment and accessories	75.51%
7) Performance Standard 5.7 : Demonstrate Safe and Proper Techniques in Oxy-fuel Gas Cutting (OFC)	44.9%
1) 5.7.1 Perform safety inspections of OFC equipment and accessories	44.9%
6) Content Standard 6.0 Apply Fundamental Electronic and Instrumentation Principles	60.65%
1) Performance Standard 6.1 : Demonstrate Analog and Digital Electronic Principles	67.22%
1) 6.1.1 Demonstrate safe use of electricity and lab equipment	47.45%
2) 6.1.2 Understand and demonstrate basic electronic theory	70.41%
4) 6.1.4 Utilize tools and test equipment appropriately	63.27%
6) 6.1.6 Verify Ohms Law and power equations	79.59%
3) Performance Standard 6.3 : Demonstrate Diagnostic and Troubleshooting Practices	57.14%
1) 6.3.1 Explain a diagnostic procedure	57.82%
2) 6.3.2 Identify the components of a safety procedure checklist	53.06%
3) 6.3.3 Utilize all safety procedures necessary before performing a repair (e.g., lock-out/tag-out, etc.)	64.69%
8) 6.3.8 Use manufacturer s documentation for troubleshooting	50.68%
10) 6.3.10 Troubleshoot and repair common problems	51.02%