

# ETE 275 Mechanics and Materials Laboratory: Equipment Safety

by COE Administrator

## Safety Assessment: "First" Safety Score, Average

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### Equipment Safety Assessment

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Safety is very important in K-12 Technology and Engineering classrooms. This assessment records student's safety knowledge on 8 pieces of equipment commonly found in some Technology and engineering K-12 laboratories.

Target Performance is PROFICIENT.

### Overview of Course and Assessment

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ETE275, Mechanics and Materials Laboratory, is an integrated laboratory experience for students to explore common material processing tools and machine practices. Students will apply and synthesize skills and techniques they have learned in prerequisite and co-requisite courses. A critical element of this class is Safe laboratory practices on equipment and learn how to manage safety in their K-12 classrooms/labs. Safe procedures must be demonstrated and stressed in all materials processing activities. Students are qualified through the safety program to operate basic machines in the materials laboratory. Each student receives a Machine Safety Program Manual. Students also receive additional instruction on teacher liability, methods for machine qualifications, general laboratory safety rules, metal processing safety rules, wood processing safety rules, general power equipment safety rules and general hand tool safety rules. Students view videos and take safety tests. When they have demonstrated satisfactory cognitive and performance competence, they are added to the "Approved to Operate Laboratory Equipment Form." Students on the approved list can attend open laboratory times and sign in to work. Also, as a part of this course students are instructed on how to set up a safety management system within their own K-12 classrooms/labs, and are themselves tested on the safety concerns for a variety of pieces of equipment. Each student is required to take a safety quiz for 8 pieces of equipment. If in the first time taking the quiz a student does not score a perfect 10 out of 10, then the student must write extensively on the questions they got wrong, and retake the exam. The average of only the "first quiz" grades for all eight pieces of equipment are recorded and used for this Safety Assessment. The eight pieces of equipment are: (i) Drill Press, (ii) Mitre Saw, (iii) Jointer, (iv) Table Saw, (v) Surfacers/Planer, (vi) Bandsaw, (vii) Router and (viii) Lathe.

## Assessor

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The assessor is the Professor of record for Course ETE275, Mechanics & Materials Laboratory

## Safety Performance Assessment

	<b>Distinguished</b> (3.000 pts)	<b>Proficient</b> (2.000 pts)	<b>Developing</b> (1.000 pt)	<b>Unacceptable</b> (0.000 pt)
<b>First Test Average of 8 Equipment pieces</b> ITEA- CTTE-2003.8.D.1	Performance is evidenced by a Average First Test score average of >9.5	Targeted performance is evidenced by a Average First Test score average of >9.0	Performance is evidenced by a Average First Test score average of > or = 8.0	Performance is evidenced by a Average First Test score average of < 8.0

## Standards

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**ITEA-CTTE-2003.8.D.1** D: Exhibit safe technology laboratory practice by designing, managing, and maintaining physically safe technology learning environments.

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