DRAFTING AND DESIGN TECHNOLOGIES

COURSE SYLLABUS

Course Description: Introduction to Drafting and Design Technology

Prerequisite:none

Course Goals: To obtain basic knowledge on Mechanical and Architectural Design.

Course Fee: $30 Club Dues: $ 20 per year. **Textbook**: TBA

Required Supplies:

2H Pencil or 9mm Pencil

Method of Instruction: The main methods of teaching are individual and group instruction. The methods through which students learn information include lecture, discussion, demonstration, audio-visual programs, and guest speakers.

Classroom Standards and Rules:

1. Class attendance and assignment completion is required.
2. All students are expected to use time wisely.
3. All students are expected to be respectful of other students.
4. Safety rules will be strictly adhered to at all times.
5. All policies of the **Muscle Shoals Board of Education** as well as all the rules, regulations, and guidelines found within the **Muscle Shoals Center for Technology Student Handbook** and the **Code of conduct for Muscle Shoals City Schools** must be followed.

Philosophy

Career/Technical education is an essential part of the total educational process. It deals specifically with the development of knowledge, skills, and interpersonal relationships that prepare the student to become a productive citizen in the world of work. It is our goal that this course successfully prepares each student to successfully enter post secondary education institutions, apprenticeship programs, or obtain gainful employment.

Writing Assignments

1. Use correct grammar
2. Write a complete sentence
3. Begin each sentence with a capital letter
4. Punctuate sentences correctly
5. Use at least two sentence patterns in each paragraph

ENGINEERING GRAPHICS

_ Grading Procedures

Evaluation of Student Progress: Evaluation is based on: tests, quizzes, homework assignments, class assignments, individual/group projects, written job skills, and lab assignments.

Grading

Tests:40%
Lab: 60%

Total 100%

Additional Information

Safety Procedures:
Makeup work: All papers, reviews, and homework assignments will be turned in at the beginning of the class period on the date they are due. Students are allowed a maximum of two days to make up work after an excused absence. Upon return to school after an absence, the student is responsible for contacting the teacher for missed assignments due.
ENGINEERING GRAPHICS

Instructional Content Standards

Theory	Skills	Assessment
The student will be able to understand the following:	The student will be able to perform the following:	Evaluation methods:
Introduction to Drafting	Geometric construction, Orthographic Projection, Section Views and Dimensioning, Intro. To AutoCad, Solidworks, Sketchup	Accuracy of project and written tests
Students will use various movies, videos, tutorials, and current event articles, etc. to help support all curriculum.		

Engineering Graphics Department

Muscle Shoals Center for Technology

Module Overview

Instructor: Mrs. Sherrie Perkins Course: Introduction to Drafting

	Modules	**Suggested Time (hours)**
	Module 1: Computer-Aided Drafting Basics*	10-20
	Module 2: Basic Manual Drafting Tools and Procedures	10-15
	Module 3: Sketching and Freehand Drawing Fundamentals	5-15
	Module 4: Multiview Drawings	5-10
	Module 5: Basic Dimensioning	20-25
	Module 6: Pictorial Drawings	15-20
	Module 7: Sectional Views	10-20
	Module 8: Working Drawings	10-15
	Module 9: Auxiliary Views	10-15
	Module 10: Pattern Developments	15-20
	Module 11: Mapping	15-20
	Module 12: Electronics	5-15
	Module 13: Basic 3d CAD	3-5
	Module 14: Advanced 3D CAD*	5-10
	Module 15:Workplace Readiness	5-10

*Computer access required

Module 2: Basic Manual Drafting Tools and Procedures

Suggested Time: 10-15 hours **Level:** Introductory

Prerequisite: none

Foundational Objectives

- To use the basic manual tools traditionally used to produce drawings.
- To appreciate the concept of scale and proportion.
- To maintain a high standard of quality for drawings produced.

Common Essential Learning Foundational Objectives

- To use technical language to facilitate discussion of drawings. (COM)
- To explore technical skills to develop a drawing. (TL)
- To use numeracy skills to meet the demands of a specific task in drafting. (NUM)

Note: other CELs may be emphasized here.

	Learning Objectives	Notes
2.1	To use a parallel bar, lead holder, and triangles. (TL)	A drafting machine, arm or parallel rule may be substituted. Begin with how to place the drawing paper on the drawing board or desk. Use tape to hold the paper in place. Avoid the use of tacks or staples.
2.2	To use a scale to measure. (NUM)	Explain pencil hardness and line weight, e.g. 4H, 2H, H, HB, 2B. Explain the use of the triangle set squares and that the T-square is never placed at the top or bottom to draw vertical lines. Have students draw a horizontal line and then lines at 15° increments. Introduce the concept of scale. (NUM)
2.3	To complete a title block.	Show the students a variety of scales such as: metric, imperial, Engineers and Architectural. (COM) Explain that the scale is used to measure. It is never used to draw a line except with drafting arms or machines.
2.4	To draw objects to an exact size.	Demonstrate lettering guidelines. You may wish to use a lettering guide template. You may want to have students practice some lettering. Have students complete drawings of the front aide and top views of several simple blocks. Use model blocks if possible. Avoid blocks that require hidden lines or curves.

Module 3: Sketching and Freehand Drawing Fundamentals

Suggested Time: 5-15 hours **Level:** Introductory

Prerequisite: none

Foundational Objectives

- To manually sketch drawings of manufactured forms.
- To maintain a high standard of quality for drawings produced.

Common Essential Learning Foundational Objectives

- To strengthen the students understanding of drafting through applying the use of geometric figures and straight lines. (NUM)
- To touch and manipulate a variety of materials first hand so that students may make comparisons and evaluations. (CCT)

Note: other CELs may be emphasized here.

3.1	**Learning Objectives**	**Notes**
	To draw simple geometric figures with two and three dimensions made with straight lines.	Work with familiar shapes of blocks progressing to more difficult blocks with cutouts. Stress accuracy and neatness so images will be recognizable and demonstrate a sense of proportion and scale. (NUM)
	To sketch objects freehand that have two and three dimensions that do not have square edges. (CCT)	Students should be encouraged to practice their sketching outside of the classroom. Sketching skills can only be developed through practice.
	To sketch multi-view drawings of geometric forms. (NUM)	Graph paper may be used to help students with their sketches, e.g., isometric grid paper for the isometric sketches and regular graph paper for the multi-view sketches. Drawing on the back of the graph paper works well. Initially, it may be helpful to provide students with models to work from, to draw their sketches.
	To sketch isometric drawings of geometric forms.	Sketching can be worked into other modules by having students provide sketches of the objects before they start the final drawing on the computer. Choose a manufactured item that has painted or polished surfaces that reflect light and create highlights. Items

	To sketch a manufactured form.	such as bicycle deflectors, a cutaway model of a transmission or a kitchen utensil are good choices for subject matter. Teachers may wish to use professionals from the community as a resource;

		(e.g., architects, illustrators, software designers, drafting designers, sign writers). Seeing examples of professional sketches reinforces that sketching and drawing are important employability skills.

Module 4: Multiview Drawings

Suggested Time: 20-25 hours **Level:** Introductory

Prerequisite: Module 1 through 3

Foundational Objectives

- To understand the representation of three-dimensional objects presented on a two dimensional plane.
- To appreciate the concept of scale and proportion.
- To maintain a high standard of quality for drawings produced.

Common Essential Learning Foundational Objectives

• To use the language and terms specific to the drafting of drawings. (COM) • To use numeracy skills to meet the demands of a specific task in drafting. (NUM)

Note: other CELs may be emphasized here.

	Learning Objectives	Notes
4.1	To create a multiview drawing using orthographic projection. (TL, CCT)	Students should understand that drafting is a means of communicating. Therefore, it must be done neatly and clearly. (TL) Start with simple objects that only require object lines. It is useful to have models of the object that students can look at and hold. The importance of position and alignment of the views should be emphasized. Next, introduce objects with hidden lines. The purpose of levels, weights, styles, and colors can be explored. An object with holes can be used to introduce centerlines. Counterbored and countersunk holes can be introduced.
4.2	To be able to explain third-angle projection drawing.	Different methods to transfer details from top and side view can be explored. (CCT) Using a model inside a glass box helps students understand the concept of orthographic projection. (COM) Discuss what countries use third-angle/first-angle projection.
4.3	To lay out a drawing.	It is useful to give the students a formula to calculate the spaces between the views. (NUM) Students should understand that placement of the title block at different scales determines the scale of the plotted drawing.
		Students should be able to lay out a drawing with two or three views.

Module 5: Basic Dimensioning

Suggested Time: 15-20 hours **Level:** Introductory

Prerequisite: Module 1 through 4

Foundational Objectives

- To be able to describe size on a multi-view drawing.
- To be able to use and understand the terminology related to drafting.
- To maintain a high standard of quality for drawings produced.

Common Essential Learning Foundational Objectives

- To choose an appropriate scale ratio for drawings. (NUM)
- To develop knowledge of the use of technology in the field of drafting. (TL)

Note: other CELs may be emphasized here.

	Learning Objectives	Notes
5.1	To use terminology in context. (COM)	Define: extension lines; dimension lines; arrowheads; leaders; diameter symbols; radius symbols, and aligned and unidirectional dimensioning.
	To apply dimensions. (NUM, TL)	When using CAD software, the scale of the final plotted drawing will determine the size of the text to be used and the distances dimension lines are placed from the object. Therefore the title block must be placed before dimensioning starts. Start by dimensioning drawings that will be plotted at a scale of 1:1. (NUM) Discuss what countries use third-angle/first-angle projection. Start with simple objects that only have straight lines that require only overall dimensions. Next, introduce objects that require intermediate dimensions. Then, introduce dimension objects with simple holes, arcs and cylinders using leaders and the correct symbols. (TL)
5.3	To use proper standards or rules for dimensioning objects. (CCT)	Discuss both aligned and unidirectional dimensioning but use only unidirectional dimensioning to avoid confusion. The rules for dimensioning should be introduced as the students go through the steps of dimensioning. Students should understand that there is always more than one way to dimension each object, but usually one way is better than the others.

		Important rules should be emphasized, such as: try to group dimensions; place dimensions between the views; never dimension hidden lines; dimension to the center of arcs and circles; dimension circles with a diameter symbol; dimension arcs with a radius symbol; try not to use long extension lines; try not to cross extension lines; and, the correct placement of leaders.

Module 6: Pictorial Drawings

Suggested Time: 15-20 hours **Level:** Introductory

Prerequisite: Module 1 through 5

Foundational Objectives

- To understand the representation of three-dimensional objects presented on a two dimensional plane.
- To appreciate the concept of scale and proportion.
- To maintain a high standard of quality for drawings produced.

Common Essential Learning Foundational Objectives

- To produce pictorial drawings. (TL)
- To use the language and terms specific to the drafting of drawings. (COM)

Note: other CELs may be emphasized here.

	Learning Objectives	Notes
6.1	To produce isometric drawings. (TL)	Define, explain and show illustrations of isometric drawings. Start with objects that will require only isometric lines to draw. Then draw objects with some non-isometric lines. Show how the non-isometric lines are not parallel to any of the isometric axis. (NUM) Objects containing circles and arcs can be drawn once the basics have been mastered.
6.2	To produce oblique cavalier drawings.	Define, explain and show illustrations of oblique cavalier drawings. Start with objects that will require only straight lines. Student should understand that circles and arcs should be placed on the front plane of the oblique drawing so they are not distorted.
6.3	To produce oblique cabinet drawings. (COM)	Define, explain and show illustrations of cabinet drawings. When arcs and circles appear on more than one plane it is better to use an isometric drawing.

		The face of the object with the longest dimensions should be placed parallel to the front plane.

Module 7: Sectional Views

Suggested Time: 10-15 hours **Level:** Introductory

Prerequisite: Module 1 through 6

Foundational Objectives

- To be able to describe shape in a multi-view drawing.
- To maintain a high standard of quality for drawings produced.

Common Essential Learning Foundational Objectives

- To learn terminology used in the drafting industry and use said terminology in context. (COM)
- To use appropriate scale ratios when producing drawings. (NUM)

Note: other CELs may be emphasized here.

	Learning Objectives	Notes
7.1	To discuss the purpose of sectional views.	Models are useful to show what the interior of some objects looks like by cutting away part of the object. (NUM)
7.2	To produce sectional drawings. (NUM)	Hidden lines can become confusing when the drawing is complicated. Provide several examples when discussing hidden lines. Start with full sections. Keep the objects simple. Use some objects that have ribs and webs. Introduce the symbols for cutting plane lines and section lines. (COM)
7.3	To produce several types of sectional drawings.	Explore the methods used to hatch or pattern an area. A model is useful to help show which areas need to be hatched. Have students complete at least one full section, half section, and offset section. Other types of sections can be done, if time allows.

Module 8: Working Drawings

Suggested Time: 15-20 hours **Level:** Intermediate

Prerequisite: Module 1 through 7

Foundational Objectives

- To be able to produce simple working drawings for mechanical projects.
- To be able to describe size on a multi-view drawing.
- To be able to describe shape in a multi-view drawing.
- To maintain a high standard of quality for drawings produced.

Common Essential Learning Foundational Objectives

- To learn related vocabulary and use it in context. (COM)
- To use numeracy skills to meet the demands of a specific task in drafting. (NUM)

Note: other CELs may be emphasized here.

	Learning Objectives	Notes
8.1	To determine the correct views to draw for each part.	Select an assembly of parts that are not too complicated. (CCT)
8.2	To determine the correct type of drawing required to describe each part accurately.	Work from an exploded pictorial view that shows the order of assembly. If you have the actual object they are going to draw, this really helps students to visualize. Discuss with the students the assembly of parts and the function of the parts.
8.3	Discuss which parts require sectional views, auxiliary views and the number of views. (PSVS)	Discuss which parts require sectional views, auxiliary views and the number of views. (PSVS) Most working drawings do not include fasteners in the drawing but you might want to include them.
	To lay out the parts in a title block.	Discuss with the students the number of views required to show all the parts. Discuss whether a sectional view is required. If there are a number of pieces, a description of the parts relationship is needed.
	To draw an assembly drawing that shows all the parts. (TL)	
	To label all the parts. (COM)	

	To create a parts list or a bill of material.	

Module 9: Auxiliary Views and Revolutions

Suggested Time: 10-20 hours **Level:** Intermediate

Prerequisite: Module 1 through 8

Foundational Objectives

- To be able to describe shape in a multi-view drawing.
- To maintain a high standard of quality for drawings produced.

Common Essential Learning Foundational Objectives

- To use numeracy skills while producing auxiliary view drawings. (NUM) • To understand the difference between auxiliary views and revolutions. (CCT)

Note: other CELs may be emphasized here.

	Learning Objectives	Notes
9.1	To produce auxiliary view drawings. (TL, NUM)	Students must first be able to identify the view that has the edge view of the inclined surface. Start with objects that have only straight lines. Objects with arcs and curves can be drawn once the straight line objects have been mastered.
9.2	To add dimensioning to the drawings. (CCT)	Define auxiliary plane and truncated. (COM) Adding dimensions to the drawing will help show the students that the auxiliary view gives the correct shape and size of the inclined surface.
	To produce secondary auxiliary views. (Optional)	Once primary auxiliary views have been mastered then secondary auxiliary views can be introduced. Keep the objects very simple. (TL)
	To produce drawings using the revolution process.	The difference between auxiliary views and revolutions should be discussed. Although the results are the same, the process of doing the two types of drawings should be emphasized.

Module 10: Pattern Developments

Suggested Time: 5-15 hours **Level:** Advanced
Prerequisite: Module 1 through 9

Foundational Objectives

- To be able to use and understand the terminology related to drafting.
- To understand the representation of three-dimensional objects presented on a two dimensional plane.
- To be able to describe size on a multi-view drawing.
- To be able to describe shape in a multi-view drawing.
- To become aware of the career opportunities that exist in the field of drafting.

Common Essential Learning Foundational Objectives

- To learn related vocabulary and use it in context. (COM)
- To create drawings that demonstrate an understanding of drawing tools and symbols. (TL) • To use numeracy skills to meet the demands of a specific task in drafting. (NUM)

Note: other CELs may be emphasized here.

	Learning Objectives	Notes
	.1 To list different industries that e surface developments. (COM)	A field trip to a local company that makes use of surface developments is recommended.
	2 To draw developments. (TL, NUM)	Students should produce pattern developments for a rectangular prism; a truncated rectangular prism; a truncated cylinder; a cone; a pyramid; a rectangular to round transition piece; and an oblique pyramid. (NUM) Start with straight line developments for the rectangular prism and truncated rectangular prism. Then add parallel line development for the cylinders. Then do radial line development for the pyramids and cones. Students should draw or plot some of the patterns on cardboard in order to construct the objects.

Module 11: Mapping

Suggested Time: 10-20 hours **Level:** Advanced
Prerequisite: Module 1 through 10

Foundational Objectives

- To be able to use and understand the terminology related to drafting.
- To understand the representation of three-dimensional objects presented on a two dimensional plane.
- To be able to describe size on a multi-view drawing.
- To be able to describe shape in a multi-view drawing.
- To become aware of the career opportunities that exist in the field of drafting.

Common Essential Learning Foundational Objectives

- To learn technical terms associated with mapping. (COM)
- To be able to interpret topographical and cadastral maps. (CCT)

Note: other CELs may be emphasized here.

	Learning Objectives	Notes
11.1	To become familiar with the symbols used in mapping. (COM)	Use examples of topographical and cadastral maps from the local area so students can recognize familiar features. Discuss terminology such as spot height, contour lines, contour interval, elevation, meridian, township and range, and azimuth.
	To be able to find a location on a map given the legal description. (CCT)	
	To produce a simple topographical map. (TL)	Discuss the National Topographic System. Restrict the features on the topographical map to only contour lines and hydrograph. (CCT)
	To produce a simple cadastral map.	Restrict the features on the cadastral map to property lines and the associated information.
	To use terminology in context. (COM)	Plan a field trip to see the use of Geographic Information Systems (GIS) as it relates to mapping. Discuss other uses of GIS in the areas of mapping such as highways and roads or subdivisions.

Module 12: Electronics

Suggested Time: 3-5 hours **Level:** Advanced
Prerequisite: Module 1 through 11

Foundational Objectives

- To understand the representation of three-dimensional objects presented on a two dimensional plane.
- To become aware of the career opportunities that exists in the field of drafting.

Common Essential Learning Foundational Objectives

- To learn technical terms associated with electronics. (COM)

Note: other CELs may be emphasized here.

	Learning Objectives	Notes
	To become familiar with the symbols used in electronics. (COM)	Use examples of circuits or pictorial drawings of circuits to help understand the schematic representations.
2	To produce simple schematic drawings of an electronic circuit. (TL)	Circuits made in an electronics class could be used as a model for drawing.
3	To use terminology in context. (COM)	The actual circuit's purpose may be demonstrated if you have an example from an electronics class.

Module 13: Basic 3D CAD (Optional)

Suggested Time: 5-10 hours **Level:** Introductory
ENGINEERING GRAPHICS

Prerequisite: Module 1 through 12

Foundational Objectives

• To create drawings of basic objects in a three dimensional (3D) environment. • To learn the basic functions of Computer-Aided Drafting (CAD) software.

Common Essential Learning Foundational Objectives

• To understand and use standard drawing protocols when producing 3D drawings. (TL) • To use the concept of scale while producing drawings. (NUM)

Note: other CELs may be emphasized here.

	Learning Objectives	Notes
	To create a 3D file.	Students should understand the difference between a 3D file and a 2D file when using CAD software. When working with 3D CAD software, it is better to think of it as building the object. (TL) The steps to create a 3D file will vary depending on the program used. Start with a simple block or slab. Then progress to objects with holes, protrusions and cuts. Keep the objects simple. Producing drawings of the same objects used in the multi view module and the pictorial module helps students understand the differences between the three methods of representation. (NUM) https://alex.state.al.us/LR/CR/58666 SIMPLE MACHINE CHALLENGE
	2 To produce a slab or a block in a 3D file. (TL, NUM)	
	3 To create holes in the slab or block.	
	4 To create protrusions and cut on the slab or block.	
	5 Create a simple machine using 3D CAD. (SCI)	

Module 14: Advanced 3D CAD (Optional)

Suggested Time: 15-25 hours **Level:** Advanced

Prerequisite: Module 1 through 13

ENGINEERING GRAPHICS

Foundational Objectives

- To create drawings of basic objects in a three dimensional (3D) environment.
- To maintain a high standard of quality for drawings produced.

Common Essential Learning Foundational Objectives

- To use computer software to produce 3D models. (TL)
- To learn technical terms associated with 3D models. (COM, TL)

Note: other CELs may be emphasized here.

	Learning Objectives	Notes
	1 To produce project models in 3D CAD environment. (TL)	One major project from a previous module may be selected and transformed into a 3D model. If a house is selected, only the outside or a few of the rooms from the inside should be attempted. (CCT) If a piping project is selected, valves should be simplified. If a mapping project is selected, a relatively small area with dramatic elevation changes works best. An electronic project may be converted to a 3D model. It is recommended that students should have some electronic background, if they make such a choice. (TL, NUM)
	2 To add materials to the project in the 3D CAD environment.	
	3 To add lighting to the 3D CAD environment.	
	4 To maintain an electronic portfolio of completed drawings. (TL)	Caution students to back-up their files and to include electronic files in their portfolio.

Module 15: Workplace Readiness

See the link below for CTSO Workplace Readiness Lesson.
(https://www.skillsusa.org/wp-content/uploads/2019/07/Introducing-the-SkillsUSA-Framework-Lesson.docx)

Common Essential Learning (CELs)

The incorporation of the Common Essential Learning(CELs) into the instruction and assessment of the Engineering Graphics curriculum offers many opportunities to develop student's knowledge, skills, and abilities. The purpose of the CELs is to assist students with learning concepts, skills, and attitudes necessary to make transitions to career, work, and adult life.

Common Essential Learning (CELs) Coding

COM = Communication

NUM = Numeracy

CCT = Critical and Creative Thinking

TL = Technological Literacy

PSVS = Personal and Social Values and Skills

IL = Independent Learning

SCI = Science Literacy

CTSO = Career and Technical Student Organization

Communication:

The goal of incorporating Communication into Engineering Graphics curricula is to promote students' learning in all school subjects through improving their language abilities within each

subject. What is desired are students who can bring order and meaning to facts and experiences and communicate that understanding effectively to others.

Numeracy:

The goal of incorporating Numeracy into Engineering Graphics curricula is to develop individuals who can cope confidently and competently with everyday situations demanding the use of mathematical concepts, as well as developing their ability to learn new concepts when necessary. What is desired are students who know how to compute, measure, estimate and interpret mathematical data, know when to apply these same skills and techniques, and understand why these particular processes apply. Further, Numeracy is intended to strengthen students' learning in all school subjects through providing them with grounded understanding of the quantitative aspects of each subject.

Critical and Creative Thinking:

The goal of incorporating critical and creative thinking processes into Engineering Graphics curricula is to develop individuals who value knowledge, learning and the creative process, who can

and will think for themselves, yet recognize the limits of individual reflection and the need to contribute to and build upon mutual understandings of social situations. What is desired are students who have purposes for learning, know how and when to question, who recognize when more information is needed and the type of knowledge which is required, know how to find and organize information, and who can generate and evaluate a number of alternatives to human problems.

Technological Literacy:

The goal of incorporating Technological Literacy into Engineering Graphics curricula is to develop individuals who understand how technology and society influence one another and who are able to use this knowledge in their every day decision making. What is desired are students who are able to analyze the technological influences on their lives and see themselves as having roles and responsibilities in shaping public policy related to technological change.

Personal and Social Values and Skills:

The goal of this Common Essential Learning is to assist in the development of compassionate and fair-minded persons who can make positive contributions to society as individuals and as members of groups. What is desired, are individuals whose actions reflect an educated, rational and empathetic sense of social responsibility. In the classroom, this Common Essential Learning has two related aims: to support students in treating other persons with respect; and, to support students in coming to a better understanding of the personal, moral, social and cultural aspects of school learning.

Independent Learning:
ENGINEERING GRAPHICS

Independent Learning focuses on creation of the opportunities and experiences necessary for students to become capable, self-reliant, self-motivated and life-long learners. What is desired are students who value learning as an empowering activity of great personal and social worth. All of the other C.E.L.s contribute to the goal of developing independent learners.

Career and Technical Student Organization

Career and Technical Student Organizations (CTSOs) Nationally affiliated Career and Technical Student Organizations such as SkillsUSA are an integral part of classroom instruction in each career and technical education program and are essential for the growth and development of a career-ready workforce. In conjunction with coursework completed in each cluster, CTSOs make a positive difference in the lives of students by developing their potential for leadership, personal growth, and career success. The purpose of these organizations is to help students develop an understanding of all aspects of industry and technology while learning teamwork and leadership skills. The importance of CTSOs is indicated by their inclusion in the foundational standards to be taught in every Architecture and Construction course. Goals of student organizations include:

- developing individual potential;
- developing effective leadership and citizenship skills through social, economic, scholastic, and

civic activities;
• increasing knowledge and understanding of an ever-changing society.
• assisting in the exploration of occupational choices and the development of essential workplace skills; • participating in career development events; and
• serving the school and community through community service projects.