0646.0102CL July 2001
Florida Department of Education
CLUSTER CURRICULUM FRAMEWORK

Cluster Title: Masonry
Cluster Type: Job Preparatory
Occupational Area: Industrial Education
Components Two Programs, One Core, Four Occupational Completion Points

	Secondary	PSAV
Grade Level	9-12, 30, 31	30, 31
Facility Code	203	203
CTSO	SkillsUSA-VICA	SkillsUSA-VICA
Co-op Method	Yes	Yes
Apprenticeship	Yes	Yes

I.**PURPOSE:** The purpose of the programs in this cluster is to prepare students for employment in the brick, block, and concrete masonry industry.

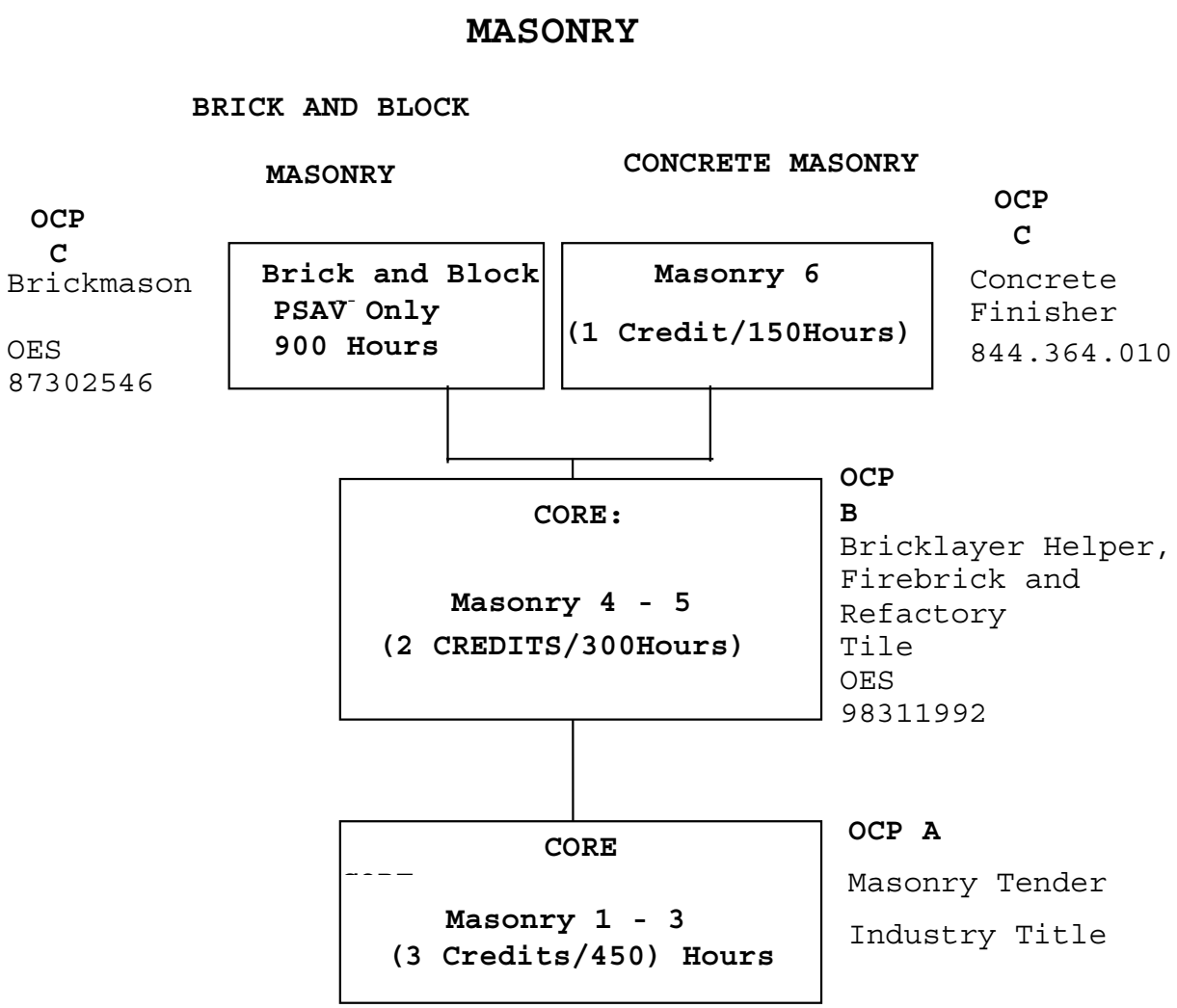
This cluster of programs focuses on broad, transferable skills, stresses the understanding of all aspects of the masonry industry, and demonstrates elements of the industry such as planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues, and health, safety, and environmental issues.

II.**CLUSTER STRUCTURE:** This cluster is a planned sequence of instruction consisting of two programs with one common core and four occupational completion points. The recommended sequence allows students to complete specified portions of the program for employment or to remain for advanced training. A student who completes the applicable competencies at any occupational completion point may either continue with the training program or terminate as an occupational completer.

It is recommended that students complete the core or demonstrate a mastery of the student performance standards contained in the core before advancing to the course(s) in the next level of either of the programs, Brick and Block Masonry or Concrete Masonry.

The Concrete Masonry program may be offered at both secondary and postsecondary adult vocational (PSAV) levels. For the Brick and Block Masonry program, Masonry 1 through 3 and Masonry 4 and 5 may be offered at both secondary and PSAV levels, but Brick and Block Masonry courses are recommended for PSAV only.

The following diagram illustrates the cluster structure:



At the secondary level, this cluster of programs consists of the following courses, which include the core:

CONCRETE MASONRY PROGRAM (8722600) - 6 secondary credits

CORE COURSES
8722610 - Masonry 1
8722620 - Masonry 2
8722630 - Masonry 3
8722640 - Masonry 4
8722650 - Masonry 5
8722660 - Masonry 6

BRICK AND BLOCK MASONRY PROGRAM (8722900) - 5 secondary credits

CORE COURSES
8722610 - Masonry 1
8722620 - Masonry 2
8722630 - Masonry 3
8722640 - Masonry 4
8722650 - Masonry 5

III.**LABORATORY ACTIVITIES:** Classroom, shop, and laboratory activities are an integral part of this cluster. These activities include instruction in the use of safety procedures, tools, equipment, materials, and processes found in the industry. Equipment and supplies should be provided to enhance hands-on experiences for students in the chosen occupation.

III.**SPECIAL NOTE: SkillsUSA**-VICA, Inc. is the appropriate Career and Technical Student Organization (CTSO) for providing leadership training and for reinforcing specific career and technical skills. Career and Technical Student Organizations, when provided, shall be an integral part of the career and technical instructional program, and the activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.065, FAC.

The programs in this cluster may be offered in postsecondary adult vocational (PSAV) courses. Vocational credit shall be awarded to the student on a transcript in accordance with Section 230.643, F.S.

Cooperative training - OJT is appropriate for this program. Whenever cooperative training - OJT is offered, the following are required for each student: a training plan, signed by the student, teacher, and employer, which includes instructional objectives and a list of on-the-job and in-school learning experiences; a workstation that reflects equipment, skills and tasks that are relevant to the occupation which the student has chosen as a career goal. The student must receive compensation for work performed.

In accordance with Rule 6A-10.040, FAC, the minimum basic-skills grade levels required for adult vocational students to complete this program are: Mathematics 9.0, Language 8.0, Reading 8.0. These grade-level numbers correspond to grade-equivalent scores obtained on one of the state-designated basic-skills examinations. If a student does not meet the basic-skills level required for completion of the program, remediation should be provided concurrently through Vocational Preparatory Instruction (VPI). Please refer to the Rule for exemptions.

SCANS Competencies: Instructional strategies for this program must include methods that require students to identify, organize, and use resources appropriately; to work with each other cooperatively and productively; to acquire and use information; to understand social, organizational, and technological systems; and to work with a variety of tools and equipment. Instructional strategies must also incorporate the methods to improve students' personal qualities and high-order thinking skills.

When a secondary student with a disability is enrolled in a vocational class with modifications to the curriculum framework, the particular outcomes and student performance standards, which the student must master to earn credit, must be specified on an individual basis. The job or jobs for which the student is being trained should be reflected in the student's desired postschool outcome statement on the Transition Individual Educational Plan (Transition IEP).

The standard length of this program is 1650 hours for Brickmason and 900 hours for Concrete Finisher.

July 2001
Florida Department of Education
INTENDED OUTCOMES

Program Title: Brick and Block Masonry Program

	Secondary	**PSAV**
Program Number	**8722900**	**I463112**
CIP Number	0646.010203	0646.010203
Grade Level	9-12, 30, 31	30, 31
Length	5 Credits	1650 Hours+ 900 PSAV Hours
Certification	TEC CONSTR ¶7 ¶G BLDG CONST ¶7 ¶G TROWEL TR @7 G	TEC CONSTR ¶7 ¶G BLDG CONST ¶7 ¶G TROWEL TR @7 G

Basic Skills
Math 9
Language 8
Reading 8

INTENDED OUTCOMES: After successfully completing the appropriate course(s) for each occupational completion point of this program, the student will be able to perform the following:

OCCUPATIONAL COMPLETION POINT - DATA CODE - A (450 Hours)
MASONRY TENDER - INDUSTRY TITLE

01.0 Follow safety practices.
02.0 Characterize the masonry industry.
03.0 Identify and use hand tools.
04.0 Select and mix mortars and concrete.
05.0 Describe the properties, characteristics, and uses of brick.
06.0 Describe the properties, characteristics, and uses of concrete block.
07.0 Lay brick and/or block to the line.
08.0 Describe the various types and uses of bonding.
09.0 Identify the various methods of masonry practices.
10.0 Clean masonry.
11.0 Erect and disassemble basic scaffolds.
12.0 Apply appropriate communication and computer skills.
13.0 Apply appropriate math skills.
14.0 Demonstrate an understanding of the appropriate basic science.
15.0 Demonstrate positive customer-relations skills.
16.0 Demonstrate employability skills.
17.0 Demonstrate an understanding of entrepreneurship.

OCCUPATIONAL COMPLETION POINT - DATA CODE - B (300 Hours)
BRICKLAYER HELPER, FIREBRICK AND REFRACTORY TILE -
DOT CODE 861.687-010

18.0 Read construction drawings and specifications.
19.0 Perform building layout.
20.0 Build foundations.
21.0 Estimate materials and cost.
22.0 Operate and maintain power equipment.

OCCUPATIONAL COMPLETION POINT - DATA CODE - C (900 Hours)
BRICKMASON - DOT CODE 861.381-018

23.0 Perform construction details.
24.0 Demonstrate productivity skills.

July 2001
Florida Department of Education
STUDENT PERFORMANCE STANDARDS

Program Title: Brick and Block Masonry
Secondary Number: 8722900
Postsecondary Number: I463112

OCCUPATIONAL COMPLETION POINT - DATA CODE - A
MASONRY TENDER - INDUSTRY

01.0 FOLLOW SAFETY PRACTICES--The student will be able to:

01.01 Identify and follow general safety rules.
01.02 Explain the purpose of the Occupational Safety and Health Administration (OSHA).
01.03 Describe first-aid procedures.
01.04 Follow safety practices when using tools and equipment.

02.0 CHARACTERIZE THE MASONRY INDUSTRY--The student will be able to:

02.01 Summarize the history of the masonry industry.
02.02 Explain the importance of the masonry industry to the local, state, and national economy.
02.03 Identify employment and advancement opportunities in the masonry industry.
02.04 Explain the factors involved in good-quality work.

03.0 IDENTIFY AND USE HAND TOOLS--The student will be able to:

03.01 Identify, care for, and use basic hand tools.
03.02 Select hand tools for specific jobs.
03.03 Identify power tools.
03.04 Read English rules to the 1/16".
03.05 Read brick-spacing rules and brick modular rules.

04.0 SELECT AND MIX MORTARS AND CONCRETE--The student will be able to:

04.01 Identify types of mortars.
04.02 Identify the ingredients and properties of mortars.
04.03 Identify the properties and characteristics of concrete.
04.04 Identify colored mortars (admix and factory-blended).
04.05 Identify the types and purposes of grouts.
04.06 Store and place materials.
04.07 Select mortars and concrete.
04.08 Mix mortars by hand and by machine.
04.09 Mix concrete by hand and by machine.
04.10 Clean up tools, equipment, and the work site.

05.0 DESCRIBE THE PROPERTIES, CHARACTERISTICS, AND USES OF BRICK--The student will be able to:

05.01 Explain the brick-manufacturing process.
05.02 Identify the properties and characteristics of brick.
05.03 Distinguish between standard and modular bricks.
05.04 Describe the different types of bricks and their principal uses.
05.05 Identify brick positioning in a wall.

06.0 DESCRIBE THE PROPERTIES, CHARACTERISTICS, AND USES OF CONCRETE BLOCK--The student will be able to:

06.01 Explain the manufacturing process of concrete block.
06.02 Identify the properties and characteristics of concrete block.
06.03 Describe the different types, including shapes and sizes, of concrete blocks and their principal uses.

07.0 LAY BRICK AND/OR BLOCK TO THE LINE--The student will be able to:

07.01 Spread mortar for brick and/or block.
07.02 Butter head joints.
07.03 Set up masonry materials.
07.04 Pull a line.
07.05 Cut bricks and/or blocks with a hammer, a brick set, and a trowel.
07.06 Temper mortar.
07.07 Maintain proper spacing of head and bed joints.
07.08 Point and tool joints in brick and/or block walls.
07.09 Lay brick and/or block to the line.

08.0 DESCRIBE THE VARIOUS TYPES AND USES OF BONDING--The student will be able to:

08.01 Define and describe pattern, structural, and adhesive bonding.
08.02 Differentiate among and use stretcher, common, English, English cross, Flemish, and stack bonds.

09.0 IDENTIFY THE VARIOUS METHODS OF MASONRY PRACTICES--The student will be able to:

09.01 Identify the methods of basic building layouts.
09.02 Identify the methods of digging and pouring footings.
09.03 Identify the methods of forming, grading, and pouring concrete slabs.
09.04 Identify the different types of reinforced masonry, flashing, wall reinforcement, and ties.
09.05 Identify measuring tools.
09.06 Identify power equipment.

10.0 CLEAN MASONRY--The student will be able to:

10.01 Follow safety practices when cleaning masonry.
10.02 Identify reasons for cleaning.
10.03 Identify and select cleaning materials and equipment.
10.04 Prepare cleaning solutions.
10.05 Point new and old work.
10.06 Prepare the area.
10.07 Clean the wall, using different methods.

11.0 ERECT AND DISASSEMBLE BASIC SCAFFOLDS--The student will be able to:

11.01 Follow safety practices when working with ladders and scaffolds.
11.02 Erect and disassemble basic scaffolds.

12.0 APPLY APPROPRIATE COMMUNICATION AND COMPUTER SKILLS--The student will be able to:

12.01 Ask and answer questions coherently and concisely.
12.02 Read and follow written instructions and listen to and follow oral instructions.
12.03 Make oral presentations.
12.04 Write reports using word-processing software.
12.05 Read and interpret industry-related materials.
12.06 Find information in technical literature such as a manufacturer's manual.
12.07 Read and interpret the graphs, charts, diagrams, and tables commonly used in the industry.
12.08 Fill out the forms and invoices commonly used in the industry.
12.09 Demonstrate appropriate telephone communication skills.
12.10 Use industry-related computer software.

13.0 APPLY APPROPRIATE MATH SKILLS--The student will be able to:

13.01 Solve job-related problems for volume, weight, area, circumference, and perimeter measurements for rectangles, squares, and cylinders.
13.02 Solve job-related problems for ratios and proportions.
13.03 Determine the purchase price of items, including the sales tax.
13.04 Compute federal, state, and local taxes.

14.0 DEMONSTRATE AN UNDERSTANDING OF THE APPROPRIATE BASIC SCIENCE--The student will be able to:

14.01 Explain molecular action as a result of temperature extremes, chemical reaction, and moisture content.
14.02 Explain pressure measurement in terms of pounds per square inch (PSI) and inches of mercury.
14.03 Draw conclusions or make inferences from data.
14.04 Identify health-related problems caused by exposure to work-related chemicals and hazardous materials.
14.05 Describe the proper precautions for handling work-related chemicals and hazardous materials.

15.0 DEMONSTRATE POSITIVE CUSTOMER-RELATIONS SKILLS--The student will be able to:

15.01 Exercise self-control.
15.02 Identify and demonstrate appropriate responses to criticism.
15.03 Explain the effects of positive human-relations skills on success in the business.
15.04 Demonstrate respect for people and property.

16.0 DEMONSTRATE EMPLOYABILITY SKILLS--The student will be able to:

16.01 Conduct a job search and identify advanced-training opportunities.
16.02 Secure information about a job.
16.03 Identify documents that may be required for a job application.
16.04 Complete a job-application form.
16.05 Demonstrate competence in job-interview techniques.
16.06 Demonstrate productive work habits and positive attitudes.

16.07 Demonstrate knowledge of how to make job changes appropriately.
16.08 Demonstrate ethical and responsible practices.
16.09 Demonstrate acceptable personal-hygiene habits and a professional appearance.
16.10 Apply the principles of time management, work simplification, and teamwork when performing assigned tasks.
16.11 Explain the importance of taking pride in the quality of work performed.
16.12 Describe the importance of a drug-free workplace and industry policy toward drug use.
16.13 Describe the ramifications of a poor driving record on employment opportunities.
16.14 Describe Florida's "Right-to-Know" Law as recorded in the Florida Statutes, Chapter 442.
16.15 Explain the importance of confidentiality in the workplace.

17.0 DEMONSTRATE AN UNDERSTANDING OF ENTREPRENEURSHIP--The student will be able to:

17.01 Define "entrepreneurship."
17.02 Describe the importance of entrepreneurship to the American economy and the role of small business in the free-enterprise system.
17.03 Explain the advantages and disadvantages of business ownership.
17.04 Explain the risks involved in the ownership of a business.
17.05 Identify the necessary personal characteristics of a successful entrepreneur.
17.06 Identify the business skills needed to operate a small business efficiently and effectively.
17.07 Describe the employer's responsibilities to support the business and industry.

OCCUPATIONAL COMPLETION POINT - DATA CODE - B
BRICKLAYER HELPER, FIREBRICK AND REFRACTORY TILE -
DOT CODE 861.687-010

18.0 READ CONSTRUCTION DRAWINGS AND SPECIFICATIONS--The student will be able to:

18.01 Identify types of drawings.
18.02 Identify symbols on the drawings.
18.03 Read and interpret simple drawings.
18.04 Read and interpret specifications.
18.05 Explain the importance of following local, state, and national codes and standards.
18.06 Interpret a finished schedule.
18.07 Use an architect's scale.

19.0 PERFORM BUILDING LAYOUT--The student will be able to:

19.01 Read and interpret plot plans.
19.02 Establish building corners.
19.03 Build batter boards and establish building lines and elevations.
19.04 Dig, prepare, and pour footings to local codes and standards.

20.0 BUILD FOUNDATIONS--The student will be able to:

20.01 Establish and build corner leads.
20.02 Build foundation walls to floor elevations.
20.03 Make foundation walls waterproof.
20.04 Install flashing, anchor bolts, termite shields, and weep holes.

21.0 ESTIMATE MATERIALS AND COST--The student will be able to:

21.01 Estimate the materials needed for a specific job.
21.02 Estimate the cost of the materials, including the sales tax.

22.0 OPERATE AND MAINTAIN POWER EQUIPMENT--The student will be able to:

22.01 Follow safety practices when using and maintaining power equipment.
22.02 Use a masonry saw with an abrasive blade to cut masonry units.
22.03 Use a masonry saw with a diamond blade to cut masonry units.
22.04 Set up, operate, and maintain power tools and equipment.

OCCUPATIONAL COMPLETION POINT - DATA CODE - C
BRICKMASON - OES 87302546

23.0 PERFORM CONSTRUCTION DETAILS--The student will be able to:

23.01 Build 4" and 8" brick corners.
23.02 Build 4", 6", 8", and 12" block corners.
23.03 Build reinforced masonry walls, composite walls, and cavity walls.
23.04 Erect corner poles.
23.05 Course brick heights.
23.06 Build brick and/or block sills, steps, piers, pilasters, columns, brick chase, flue, paving, BBQ pits, and planters.
23.07 Construct a brick-veneer wall.
23.08 Set precast and built-in lintels.
23.09 Build modular brick walls.
23.10 Lay glass blocks.
23.11 Set door jams.
23.12 Reinforce masonry walls.

24.0 DEMONSTRATE PRODUCTIVITY SKILLS--The student will be able to:

24.01 Lay and joint standard brick on a straight brick-veneer wall, with established leads, at an average daily rate of:
a. 100-200
b. 200-300
c. 300-400
d. 400-500
e. 500-600
f. 600-700
g. 700-800
h. over 800
24.02 Lay and joint 8" block on a straight block wall, with established leads, at an average daily rate of:
a. 50-100
b. 100-150
c. 150-200
d. 200-250
e. 250-300
f. 300-350
g. 350-400
h. over 400

July 2001
Florida Department of Education
STUDENT PERFORMANCE STANDARDS

Course Number: 8722610
Course Title: Masonry 1
Course Credit: 1

COURSE DESCRIPTION:

This course provides students with the competencies essential to the masonry industry. These competencies include knowledge and skills related to safety practices, the masonry industry in America, the use of hand tools, the selection and mixing of mortars and concrete, and brick and block laying.

01.0 FOLLOW SAFETY PRACTICES--The student will be able to:

01.01 Identify and follow general safety rules.
01.02 Explain the purpose of the Occupational Safety and Health Administration (OSHA).
01.03 Describe first-aid procedures.
01.04 Follow safety practices when using tools and equipment.

02.0 CHARACTERIZE THE MASONRY INDUSTRY--The student will be able to:

02.01 Summarize the history of the masonry industry.
02.02 Explain the importance of the masonry industry to the local, state, and national economy.
02.03 Identify employment and advancement opportunities in the masonry industry.
02.04 Explain the factors involved in good-quality work.

03.0 IDENTIFY AND USE HAND TOOLS--The student will be able to:

03.01 Identify, care for, and use basic hand tools.
03.02 Select hand tools for specific jobs.
03.03 Identify power tools.
03.04 Read English rules to the 1/16".
03.05 Read brick-spacing rules and brick modular rules.
03.06 Course brick to a given height with the brick spacing rule and the modular rule.

04.0 SELECT AND MIX MORTARS AND CONCRETE--The student will be able to:

04.01 Identify types of mortars.
04.02 Identify the ingredients and properties of mortars.
04.03 Identify the properties and characteristics of concrete.
04.04 Identify colored mortars (admix and factory-blended).
04.05 Identify the types and purposes of grouts.
04.06 Store and place materials.
04.07 Select mortars and concrete.
04.08 Mix mortars by hand and by machine.
04.09 Mix concrete by hand and by machine.
04.10 Clean up tools, equipment, and the work site.
04.11 Build a brick 4" corner return lead.

07.0 LAY BRICK AND/OR BLOCK TO THE LINE--The student will be able to:

07.01 Set up masonry materials.
07.02 Temper mortar.
07.03 Spread mortar for brick.
07.04 Pull a line from established leads.
07.05 Butter head joints.
07.06 Lay brick to the line.
07.07 Maintain proper spacing of head and bed joints.
07.08 Cut brick with a hammer, a brick set, and a trowel.
07.09 Point and tool joints in brick walls.
07.10 Repeat the above nine tasks (07.01 - 07.09) with 8" concrete block.

July 2001
Florida Department of Education
STUDENT PERFORMANCE STANDARDS

Course Number: 8722620
Course Title: Masonry 2
Course Credit: 1

COURSE DESCRIPTION:

The purpose of this course is to develop the competencies necessary to the masonry industry. These competencies include knowledge and skills related to the properties, characteristics, and uses of brick and concrete block; bonding; methods of masonry practices; masonry cleaning; scaffolding; communication; and computer use.

05.0 DESCRIBE THE PROPERTIES, CHARACTERISTICS, AND USES OF BRICK--The student will be able to:

05.01 Explain the brick-manufacturing process.
05.02 Identify the properties and characteristics of brick.
05.03 Distinguish between standard and modular bricks.
05.04 Describe the different types of bricks and their principal uses.
05.05 Identify brick positioning in a wall.
05.06 Build 4" corner return leads and a wall 4 feet high and 12 feet long.

06.0 DESCRIBE THE PROPERTIES, CHARACTERISTICS, AND USES OF CONCRETE BLOCK--The student will be able to:

06.01 Explain the manufacturing process of concrete block.
06.02 Identify the properties and characteristics of concrete block.
06.03 Describe the different types, including shapes and sizes, of concrete blocks and their principal uses.
06.04 Build an 8" block corner return lead 7 courses high.

08.0 DESCRIBE THE VARIOUS TYPES AND USES OF BONDING--The student will be able to:

08.01 Define and describe pattern, structural, layout, and adhesive bonding.
08.02 Differentiate among and use stretcher, common, English, English cross, Flemish, and stack bonds.

09.0 IDENTIFY THE VARIOUS METHODS OF MASONRY PRACTICES--The student will be able to:

09.01 Identify the methods of basic building layouts.
09.02 Identify the methods of digging and pouring footings.
09.03 Identify the methods of forming, grading, and pouring concrete slabs.
09.04 Identify the different types of reinforced masonry, flashing, wall reinforcement, and ties.
09.05 Identify measuring tools.
09.06 Identify power equipment.

10.0 CLEAN MASONRY--The student will be able to:

10.01 Follow safety practices when cleaning masonry.
10.02 Identify reasons for cleaning.
10.03 Identify and select cleaning materials and equipment for brick and concrete block.
10.04 Prepare cleaning solutions.
10.05 Point new and old work.
10.06 Prepare the area.
10.07 Clean the wall, using different methods.

11.0 ERECT AND DISASSEMBLE BASIC SCAFFOLDS--The student will be able to:

11.01 Follow safety practices when working with ladders and scaffolds.
11.02 Erect and disassemble basic scaffolds.

12.0 APPLY APPROPRIATE COMMUNICATION AND COMPUTER SKILLS--The student will be able to:

12.01 Ask and answer questions coherently and concisely.
12.02 Read and follow written instructions and listen to and follow oral instructions.
12.03 Make oral presentations.
12.04 Write reports using word-processing software.
12.05 Read and interpret industry-related materials.
12.06 Find information in technical literature such as a manufacturer's manual.
12.07 Read and interpret the graphs, charts, diagrams, and tables commonly used in the industry.
12.08 Fill out the forms and invoices commonly used in the industry.
12.09 Demonstrate appropriate telephone communication skills.
12.10 Use industry-related computer software.

July 2001
Florida Department of Education
STUDENT PERFORMANCE STANDARDS

Course Number: 8722630
Course Title: Masonry 3
Course Credit: 1

COURSE DESCRIPTION:

This course provides students with competencies in math, basic science, customer relations, employability, and entrepreneurship.

13.0 APPLY APPROPRIATE MATH SKILLS--The student will be able to:

13.01 Solve job-related problems for volume, weight, area, circumference, and perimeter measurements for rectangles, squares, and cylinders.
13.02 Solve job-related problems for ratios and proportions.
13.03 Determine the purchase price of items, including the sales tax.
13.04 Compute federal, state, and local taxes.

14.0 DEMONSTRATE AN UNDERSTANDING OF THE APPROPRIATE BASIC SCIENCE--The student will be able to:

14.01 Explain molecular action as a result of temperature extremes, chemical reaction, and moisture content.
14.02 Explain pressure measurement in terms of pounds per square inch (PSI) and inches of mercury.
14.03 Draw conclusions or make inferences from data.
14.04 Identify health-related problems caused by exposure to work-related chemicals and hazardous materials.
14.05 Describe the proper precautions for handling work-related chemicals and hazardous materials.

15.0 DEMONSTRATE POSITIVE CUSTOMER-RELATIONS SKILLS--The student will be able to:

15.01 Exercise self-control.
15.02 Identify and demonstrate appropriate responses to criticism.
15.03 Explain the effects of positive human-relations skills on success in the business.
15.04 Demonstrate respect for people and property.

16.0 DEMONSTRATE EMPLOYABILITY SKILLS--The student will be able to:

16.01 Conduct a job search and identify advanced-training opportunities.
16.02 Secure information about a job.
16.03 Identify documents that may be required for a job application.
16.04 Complete a job-application form.
16.05 Demonstrate competence in job-interview techniques.
16.06 Demonstrate productive work habits and positive attitudes.
16.07 Demonstrate knowledge of how to make job changes appropriately.
16.08 Demonstrate ethical and responsible practices.
16.09 Demonstrate acceptable personal-hygiene habits and a professional appearance.

16.10 Apply the principles of time management, work simplification, and teamwork when performing assigned tasks.
16.11 Explain the importance of taking pride in the quality of work performed.
16.12 Describe the importance of a drug-free workplace and industry policy toward drug use.
16.13 Describe the ramifications of a poor driving record on employment opportunities.
16.14 Describe "Florida's Right-to-Know" Law as recorded in the Florida Statutes, Chapter 442.
16.15 Explain the importance of confidentiality in the workplace.

17.0 DEMONSTRATE AN UNDERSTANDING OF ENTREPRENEURSHIP--The student will be able to:

17.01 Define "entrepreneurship."
17.02 Describe the importance of entrepreneurship to the American economy and the role of small business in the free-enterprise system.
17.03 Explain the advantages and disadvantages of business ownership.
17.04 Explain the risks involved in the ownership of a business.
17.05 Identify the necessary personal characteristics of a successful entrepreneur.
17.06 Identify the business skills needed to operate a small business efficiently and effectively.
17.07 Describe the employer's responsibilities to support the business and industry.

July 2001
Florida Department of Education
STUDENT PERFORMANCE STANDARDS

Course Number: 8722640
Course Title: Masonry 4
Course Credit: 1

COURSE DESCRIPTION:

This course is designed to provide students with competencies in construction drawings and specifications and in building layout.

18.0 READ CONSTRUCTION DRAWINGS AND SPECIFICATIONS--The student will be able to:

18.01 Identify types of drawings.
18.02 Identify symbols on the drawings.
18.03 Read and interpret simple drawings.
18.04 Read and interpret specifications.
18.05 Explain the importance of following local, state, and national codes and standards.
18.06 Interpret a finished schedule.
18.07 Use an architect's scale.

19.0 PERFORM BUILDING LAYOUT--The student will be able to:

19.01 Read and interpret plot plans.
19.02 Establish building corners.
19.03 Build batter boards and establish building lines and elevations.
19.04 Dig, prepare, and pour footings to local codes and standards.

July 2001
Florida Department of Education
STUDENT PERFORMANCE STANDARDS

Course Number: 8722650
Course Title: Masonry 5
Course Credit: 1

COURSE DESCRIPTION:

This course provides students with an in-depth study of foundation building, materials and cost estimations, and power-equipment operation.

20.0 BUILD FOUNDATIONS--The student will be able to:

20.01 Build an 8" block corner 7 courses high.
20.02 Build an 8" block corner to the correct height and range of a given foundation batter board line.
20.03 Bond and build an 8" block corner to the correct height and range on the opposite corner of a given foundation batter board line.
20.04 Pull a line and build an 8" block wall between the block corners.
20.05 Establish and build the other corner leads.
20.06 Build foundation walls to floor elevations.
20.07 Make foundation walls waterproof, if required.
20.08 Install flashing, anchor bolts, termite shields, and weep holes; install vents if a wooden floor system is used.

21.0 ESTIMATE MATERIALS AND COST--The student will be able to:

21.01 Estimate the materials needed for a specific job.
21.02 Estimate the cost of the materials, including the sales tax.

22.0 OPERATE AND MAINTAIN POWER EQUIPMENT--The student will be able to:

22.01 Follow safety practices when using and maintaining power equipment.
22.02 Use a masonry saw with an abrasive blade to cut masonry units.
22.03 Use a masonry saw with a diamond blade to cut masonry units.
22.04 Set up, operate, and maintain power tools and equipment.

July 2001
Florida Department of Education
INTENDED OUTCOMES

Program Title: Concrete Masonry Program

	Secondary	**PSAV**
Program Number	**8722600**	**I463113**
CIP Number	0646.010204	0646.010204
Grade Level	9-12, 30, 31	30, 31
Length	6 Credits	900 Hours
Certification	TEC CONSTR ¶7 ¶G BLDG CONST ¶7 ¶G TROWEL TR @7 G	TEC CONSTR ¶7 ¶G BLDG CONST ¶7 ¶G TROWEL TR @7 G

Basic-Skills

Math	9
Language	8
Reading	8

INTENDED OUTCOMES: After successfully completing the appropriate course(s) for each occupational completion point of this program, the student will be able to perform the following:

OCCUPATIONAL COMPLETION POINT - DATA CODE - A (450 Hours)
MASONRY TENDER - INDUSTRY TITLE

01.0 Follow safety practices.
02.0 Characterize the masonry industry.
03.0 Identify and use hand tools.
04.0 Select and mix mortars and concrete.
05.0 Describe the properties, characteristics, and uses of brick.
06.0 Describe the properties, characteristics, and uses of concrete block.
07.0 Lay brick and/or block to the line.
08.0 Describe the various types and uses of bonding.
09.0 Identify the various methods of masonry practices.
10.0 Clean masonry.
11.0 Erect and disassemble basic scaffolds.
12.0 Apply appropriate communication and computer skills.
13.0 Apply appropriate math skills.
14.0 Demonstrate an understanding of the appropriate basic science.
15.0 Demonstrate positive customer-relations skills.

16.0 Demonstrate employability skills.
17.0 Demonstrate an understanding of entrepreneurship.

OCCUPATIONAL COMPLETION POINT - DATA CODE - B (300 Hours)
BRICKLAYER HELPER, FIREBRICK AND REFRACTORY TILE -
OES 98311

18.0 Read construction drawings and specifications.
19.0 Perform building layout.
20.0 Build foundations.
21.0 Estimate materials and cost.
22.0 Operate and maintain power equipment.

OCCUPATIONAL COMPLETION POINT - DATA CODE - C (150 Hours)
CONCRETE FINISHER - 844.364-010

23.0 Select, use, and maintain hand and power tools.
24.0 Prepare a site for concrete pouring.
25.0 Pour and finish a concrete slab.

July 2001
Florida Department of Education
STUDENT PERFORMANCE STANDARDS

Program Title: Concrete Masonry
Secondary Number: 8722600
Postsecondary Number: I463113

OCCUPATIONAL COMPLETION POINT - DATA CODE - A
MASONRY TENDER - INDUSTRY TITLE

01.0 FOLLOW SAFETY PRACTICES--The student will be able to:

01.01 Identify and follow general safety rules.
01.02 Explain the purpose of the Occupational Safety and Health Administration (OSHA).
01.03 Describe first-aid procedures.
01.04 Follow safety practices when using tools and equipment.

02.0 CHARACTERIZE THE MASONRY INDUSTRY--The student will be able to:

02.01 Summarize the history of the masonry industry.
02.02 Explain the importance of the masonry industry to the local, state, and national economy.
02.03 Identify employment and advancement opportunities in the masonry industry.
02.04 Explain the factors involved in good-quality work.

03.0 IDENTIFY AND USE HAND TOOLS--The student will be able to:

03.01 Identify, care for, and use basic hand tools.
03.02 Select hand tools for specific jobs.
03.03 Identify power tools.
03.04 Read English rules to the 1/16".
03.05 Read brick-spacing rules and brick modular rules.

04.0 SELECT AND MIX MORTARS AND CONCRETE--The student will be able to:

04.01 Identify types of mortars.
04.02 Identify the ingredients and properties of mortars.
04.03 Identify the properties and characteristics of concrete.
04.04 Identify colored mortars (admix and factory-blended).
04.05 Identify the types and purposes of grouts.
04.06 Store and place materials.
04.07 Select mortars and concrete.
04.08 Mix mortars by hand and by machine.
04.09 Mix concrete by hand and by machine.
04.10 Clean up tools, equipment, and the work site.

05.0 DESCRIBE THE PROPERTIES, CHARACTERISTICS, AND USES OF BRICK--The student will be able to:

05.01 Explain the brick-manufacturing process.
05.02 Identify the properties and characteristics of brick.
05.03 Distinguish between standard and modular bricks.
05.04 Describe the different types of bricks and their principal uses.
05.05 Identify brick positioning in a wall.

06.0 DESCRIBE THE PROPERTIES, CHARACTERISTICS, AND USES OF CONCRETE BLOCK--The student will be able to:

06.01 Explain the manufacturing process of concrete block.
06.02 Identify the properties and characteristics of concrete block.
06.03 Describe the different types, including shapes and sizes, of concrete blocks and their principal uses.

07.0 LAY BRICK AND/OR BLOCK TO THE LINE--The student will be able to:

07.01 Spread mortar for brick and/or block.
07.02 Butter head joints.
07.03 Set up masonry materials.
07.04 Pull a line.
07.05 Cut bricks and/or blocks with a hammer, a brick set, and a trowel.
07.06 Temper mortar.
07.07 Maintain proper spacing of head and bed joints.
07.08 Point and tool joints in brick and/or block walls.
07.09 Lay brick and/or block to the line.

08.0 DESCRIBE THE VARIOUS TYPES AND USES OF BONDING--The student will be able to:

08.01 Define and describe pattern, structural, and adhesive bonding.
08.02 Differentiate among and use stretcher, common, English, English cross, Flemish, and stack bonds.

09.0 IDENTIFY THE VARIOUS METHODS OF MASONRY PRACTICES--The student will be able to:

09.01 Identify the methods of basic building layouts.
09.02 Identify the methods of digging and pouring footings.
09.03 Identify the methods of forming, grading, and pouring concrete slabs.
09.04 Identify the different types of reinforced masonry, flashing, wall reinforcement, and ties.
09.05 Identify measuring tools.
09.06 Identify power equipment.

10.0 CLEAN MASONRY--The student will be able to:

10.01 Follow safety practices when cleaning masonry.
10.02 Identify reasons for cleaning.
10.03 Identify and select cleaning materials and equipment.
10.04 Prepare cleaning solutions.
10.05 Point new and old work.
10.06 Prepare the area.
10.07 Clean the wall, using different methods.

11.0 ERECT AND DISASSEMBLE BASIC SCAFFOLDS--The student will be able to:

11.01 Follow safety practices when working with ladders and scaffolds.
11.02 Erect and disassemble basic scaffolds.

12.0 APPLY APPROPRIATE COMMUNICATION AND COMPUTER SKILLS--The student will be able to:

12.01 Ask and answer questions coherently and concisely.
12.02 Read and follow written instructions and listen to and follow oral instructions.
12.03 Make oral presentations.
12.04 Write reports using word-processing software.
12.05 Read and interpret industry-related materials.
12.06 Find information in technical literature such as a manufacturer's manual.
12.07 Read and interpret the graphs, charts, diagrams, and tables commonly used in the industry.
12.08 Fill out the forms and invoices commonly used in the industry.
12.09 Demonstrate appropriate telephone communication skills.
12.10 Use industry-related computer software.

13.0 APPLY APPROPRIATE MATH SKILLS--The student will be able to:

13.01 Solve job-related problems for volume, weight, area, circumference, and perimeter measurements for rectangles, squares, and cylinders.
13.02 Solve job-related problems for ratios and proportions.
13.03 Determine the purchase price of items, including the sales tax.
13.04 Compute federal, state, and local taxes.

14.0 DEMONSTRATE AN UNDERSTANDING OF THE APPROPRIATE BASIC SCIENCE--The student will be able to:

14.01 Explain molecular action as a result of temperature extremes, chemical reaction, and moisture content.
14.02 Explain pressure measurement in terms of pounds per square inch (PSI) and inches of mercury.
14.03 Draw conclusions or make inferences from data.
14.04 Identify health-related problems caused by exposure to work-related chemicals and hazardous materials.
14.05 Describe proper precautions for handling work-related chemicals and hazardous materials.

15.0 DEMONSTRATE POSITIVE CUSTOMER-RELATIONS SKILLS--The student will be able to:

15.01 Exercise self-control.
15.02 Identify and demonstrate appropriate responses to criticism.
15.03 Explain the effects of positive human-relations skills on success in the business.
15.04 Demonstrate respect for people and property.

16.0 DEMONSTRATE EMPLOYABILITY SKILLS--The student will be able to:

16.01 Conduct a job search and identify advanced-training opportunities.
16.02 Secure information about a job.
16.03 Identify documents that may be required for a job application.
16.04 Complete a job-application form.
16.05 Demonstrate competence in job-interview techniques.
16.06 Demonstrate productive work habits and positive attitudes.

16.07 Demonstrate knowledge of how to make job changes appropriately.
16.08 Demonstrate ethical and responsible practices.
16.09 Demonstrate acceptable personal-hygiene habits and a professional appearance.
16.10 Apply the principles of time management, work simplification, and teamwork when performing assigned tasks.
16.11 Explain the importance of taking pride in the quality of work performed.
16.12 Describe the importance of a drug-free workplace and industry policy toward drug use.
16.13 Describe the ramifications of a poor driving record on employment opportunities.
16.14 Describe "Florida's Right-to-Know" Law as recorded in the Florida Statutes, Chapter 442.
16.15 Explain the importance of confidentiality in the workplace.

17.0 DEMONSTRATE AN UNDERSTANDING OF ENTREPRENEURSHIP--The student will be able to:

17.01 Define "entrepreneurship."
17.02 Describe the importance of entrepreneurship to the American economy and the role of small business in the free-enterprise system.
17.03 Explain the advantages and disadvantages of business ownership.
17.04 Explain the risks involved in the ownership of a business.
17.05 Identify the personal characteristics of a successful entrepreneur.
17.06 Identify the business skills needed to operate a small business efficiently and effectively.
17.07 Describe the employer's responsibilities to support the s and industry.

OCCUPATIONAL COMPLETION POINT - DATA CODE - B
BRICKLAYER HELPER, FIREBRICK AND REFRACTORY TILE -
DOT CODE 861.687-010

18.0 READ CONSTRUCTION DRAWINGS AND SPECIFICATIONS--The student will be able to:

18.01 Identify types of drawings.
18.02 Identify symbols on the drawings.
18.03 Read and interpret simple drawings.
18.04 Read and interpret specifications.
18.05 Explain the importance of following local, state, and national codes and standards.
18.06 Interpret a finished schedule.
18.07 Use an architect's scale.

19.0 PERFORM BUILDING LAYOUT--The student will be able to:

19.01 Read and interpret plot plans.
19.02 Establish building corners.
19.03 Build batter boards and establish building lines and elevations.
19.04 Dig, prepare, and pour footings to local codes and standards.

20.0 BUILD FOUNDATIONS--The student will be able to:

20.01 Establish and build corner leads.
20.02 Build foundation walls to floor elevations.
20.03 Make foundation walls waterproof.
20.04 Install flashing, anchor bolts, termite shields, and weep holes.

21.0 ESTIMATE MATERIALS AND COST--The student will be able to:

21.01 Estimate the materials needed for a specific job.
21.02 Estimate the cost of the materials, including the sales tax.

22.0 OPERATE AND MAINTAIN POWER EQUIPMENT--The student will be able to:

22.01 Follow safety practices when using and maintaining power equipment.
22.02 Use a masonry saw with an abrasive blade to cut masonry units.
22.03 Use a masonry saw with a diamond blade to cut masonry units.
22.04 Set up, operate, and maintain power tools and equipment.

OCCUPATIONAL COMPLETION POINT - DATA CODE - C
CONCRETE FINISHER - 844.364-010

23.0 SELECT, USE, AND MAINTAIN HAND AND POWER TOOLS--The student will be able to:

23.01 Select, use, and maintain the hand tools required for concrete masonry jobs.
23.02 Select, use, and maintain the power tools required for concrete masonry jobs.

24.0 PREPARE A SITE FOR CONCRETE POURING--The student will be able to:

24.01 Excavate and grade the site.
24.02 Erect forms.
24.03 Install a vapor barrier.
24.04 Install reinforcement and expansion materials.
24.05 Install and grade stakes.

25.0 POUR AND FINISH A CONCRETE SLAB--The student will be able to:

25.01 Pour, place, and vibrate (if necessary) concrete.
25.02 Screed to grade.
25.03 Finish concrete.
25.04 Saw control joints, if necessary.
25.05 Protect the slab.
25.06 Clean up tools, equipment, and work area.

July 2001
Florida Department of Education
STUDENT PERFORMANCE STANDARDS

Course Number: 8722610
Course Title: Masonry 1
Course Credit: 1

COURSE DESCRIPTION:

This course provides students with the competencies essential to the masonry industry. These competencies include knowledge and skills related to safety practices, the masonry industry in America, the use of hand tools, the selection and mixing of mortars and concrete, and brick and block laying.

01.0 FOLLOW SAFETY PRACTICES--The student will be able to:

01.01 Identify and follow general safety rules.
01.02 Explain the purpose of the Occupational Safety and Health Administration (OSHA).
01.03 Describe first-aid procedures.
01.04 Follow safety practices when using tools and equipment.

02.0 CHARACTERIZE THE MASONRY INDUSTRY--The student will be able to:

02.01 Summarize the history of the masonry industry.
02.02 Explain the importance of the masonry industry to the local, state, and national economy.
02.03 Identify employment and advancement opportunities in the masonry industry.
02.04 Explain the factors involved in good-quality work.

03.0 IDENTIFY AND USE HAND TOOLS--The student will be able to:

03.01 Identify, care for, and use basic hand tools.
03.02 Select hand tools for specific jobs.
03.03 Identify power tools.
03.04 Read English rules to the 1/16".
03.05 Read brick-spacing rules and brick modular rules.
03.06 Course brick to a given height with the brick spacing rule and the modular rule.

04.0 SELECT AND MIX MORTARS AND CONCRETE--The student will be able to:

04.01 Identify types of mortars.
04.02 Identify the ingredients and properties of mortars.
04.03 Identify the properties and characteristics of concrete.
04.04 Identify colored mortars (admix and factory-blended).
04.05 Identify the types and purposes of grouts.
04.06 Store and place materials.
04.07 Select mortars and concrete.
04.08 Mix mortars by hand and by machine.
04.09 Mix concrete by hand and by machine.
04.10 Clean up tools, equipment, and the work site.
04.11 Build a brick 4" corner return lead.

07.0 LAY BRICK AND/OR BLOCK TO THE LINE--The student will be able to:

07.01 Set up masonry materials.
07.02 Temper mortar.
07.03 Spread mortar for brick.
07.04 Pull a line from established leads.
07.05 Butter head joints.
07.06 Lay brick to the line.
07.07 Maintain proper spacing of head and bed joints.
07.08 Cut brick with a hammer, a brick set, and a trowel.
07.09 Point and tool joints in brick walls.
07.10 Repeat the above nine tasks (07.01 - 07.09) with 8" concrete block.

July 2001
Florida Department of Education
STUDENT PERFORMANCE STANDARDS

Course Number: 8722620
Course Title: Masonry 2
Course Credit: 1

COURSE DESCRIPTION:

The purpose of this course is to develop the competencies necessary to the masonry industry. These competencies include knowledge and skills related to the properties, characteristics, and uses of brick and concrete block; bonding; methods of masonry practices; masonry cleaning; scaffolding; communication; and computer use.

05.0 DESCRIBE THE PROPERTIES, CHARACTERISTICS, AND USES OF BRICK--The student will be able to:

05.01 Explain the brick-manufacturing process.
05.02 Identify the properties and characteristics of brick.
05.03 Distinguish between standard and modular bricks.
05.04 Describe the different types of bricks and their principal uses.
05.05 Identify brick positioning in a wall.
05.06 Build 4" corner return leads and a wall 4 feet high and 12 feet long.

06.0 DESCRIBE THE PROPERTIES, CHARACTERISTICS, AND USES OF CONCRETE BLOCK--The student will be able to:

06.01 Explain the manufacturing process of concrete block.
06.02 Identify the properties and characteristics of concrete block.
06.03 Describe the different types, including shapes and sizes, of concrete blocks and their principal uses.
06.04 Build an 8" block corner return lead 7 courses high.

08.0 DESCRIBE THE VARIOUS TYPES AND USES OF BONDING--The student will be able to:

08.01 Define and describe pattern, structural, layout, and adhesive bonding.
08.02 Differentiate among and use stretcher, common, English, English cross, Flemish, and stack bonds.

09.0 IDENTIFY THE VARIOUS METHODS OF MASONRY PRACTICES--The student will be able to:

09.01 Identify the methods of basic building layouts.
09.02 Identify the methods of digging and pouring footings.
09.03 Identify the methods of forming, grading, and pouring concrete slabs.
09.04 Identify the different types of reinforced masonry, flashing, wall reinforcement, and ties.
09.05 Identify measuring tools.
09.06 Identify power equipment.

10.0 CLEAN MASONRY--The student will be able to:

10.01 Follow safety practices when cleaning masonry.
10.02 Identify reasons for cleaning.
10.03 Identify and select cleaning materials and equipment for brick and concrete block.
10.04 Prepare cleaning solutions.
10.05 Point new and old work.
10.06 Prepare the area.
10.07 Clean the wall, using different methods.

11.0 ERECT AND DISASSEMBLE BASIC SCAFFOLDS--The student will be able to:

11.01 Follow safety practices when working with ladders and scaffolds.
11.02 Erect and disassemble basic scaffolds.

12.0 APPLY APPROPRIATE COMMUNICATION AND COMPUTER SKILLS--The student will be able to:

12.01 Ask and answer questions coherently and concisely.
12.02 Read and follow written instructions and listen to and follow oral instructions.
12.03 Make oral presentations.
12.04 Write reports using word-processing software.
12.05 Read and interpret industry-related materials.
12.06 Find information in technical literature such as a manufacturer's manual.
12.07 Read and interpret the graphs, charts, diagrams, and tables commonly used in the industry.
12.08 Fill out the forms and invoices commonly used in the industry.
12.09 Demonstrate appropriate telephone communication skills.
12.10 Use industry-related computer software.

July 2001
Florida Department of Education
STUDENT PERFORMANCE STANDARDS

Course Number: 8722630
Course Title: Masonry 3
Course Credit: 1

COURSE DESCRIPTION:

This course provides students with competencies in math, basic science, customer relations, employability, and entrepreneurship.

13.0 APPLY APPROPRIATE MATH SKILLS--The student will be able to:

13.01 Solve job-related problems for volume, weight, area, circumference, and perimeter measurements for rectangles, squares, and cylinders.
13.02 Solve job-related problems for ratios and proportions.
13.03 Determine the purchase price of items, including the sales tax.
13.04 Compute federal, state, and local taxes.

14.0 DEMONSTRATE AN UNDERSTANDING OF THE APPROPRIATE BASIC SCIENCE--The student will be able to:

14.01 Explain molecular action as a result of temperature extremes, chemical reaction, and moisture content.
14.02 Explain pressure measurement in terms of pounds per square inch (PSI) and inches of mercury.
14.03 Draw conclusions or make inferences from data.
14.04 Identify health-related problems caused by exposure to work-related chemicals and hazardous materials.
14.05 Describe the proper precautions for handling work-related chemicals and hazardous materials.

15.0 DEMONSTRATE POSITIVE CUSTOMER-RELATIONS SKILLS--The student will be able to:

15.01 Exercise self-control.
15.02 Identify and demonstrate appropriate responses to criticism.
15.03 Explain the effects of positive human-relations skills on success in the business.
15.04 Demonstrate respect for people and property.

16.0 DEMONSTRATE EMPLOYABILITY SKILLS--The student will be able to:

16.01 Conduct a job search and identify advanced-training opportunities.
16.02 Secure information about a job.
16.03 Identify documents that may be required for a job application.
16.04 Complete a job-application form.
16.05 Demonstrate competence in job-interview techniques.
16.06 Demonstrate productive work habits and positive attitudes.
16.07 Demonstrate knowledge of how to make job changes appropriately.
16.08 Demonstrate ethical and responsible practices.
16.09 Demonstrate acceptable personal-hygiene habits and a professional appearance.

16.10 Apply the principles of time management, work simplification, and teamwork when performing assigned tasks.
16.11 Explain the importance of taking pride in the quality of work performed.
16.12 Describe the importance of a drug-free workplace and industry policy toward drug use.
16.13 Describe the ramifications of a poor driving record on employment opportunities.
16.14 Describe "Florida's Right-to-Know" Law as recorded in the Florida Statutes, Chapter 442.
16.15 Explain the importance of confidentiality in the workplace.

17.0 DEMONSTRATE AN UNDERSTANDING OF ENTREPRENEURSHIP--The student will be able to:

17.01 Define "entrepreneurship."
17.02 Describe the importance of entrepreneurship to the American economy and the role of small business in the free-enterprise system.
17.03 Explain the advantages and disadvantages of business ownership.
17.04 Explain the risks involved in the ownership of a business.
17.05 Identify the necessary personal characteristics of a successful entrepreneur.
17.06 Identify the business skills needed to operate a small business efficiently and effectively.
17.07 Describe the employer's responsibilities to support the business and industry.

July 2001
Florida Department of Education
STUDENT PERFORMANCE STANDARDS

Course Number: 8722640
Course Title: Masonry 4
Course Credit: 1

COURSE DESCRIPTION:

This course is designed to provide students with competencies in construction drawings and specifications and in building layout.

18.0 READ CONSTRUCTION DRAWINGS AND SPECIFICATIONS--The student will be able to:

18.01 Identify types of drawings.
18.02 Identify symbols on the drawings.
18.03 Read and interpret simple drawings.
18.04 Read and interpret specifications.
18.05 Explain the importance of following local, state, and national codes and standards.
18.06 Interpret a finished schedule.
18.07 Use an architect's scale.

19.0 PERFORM BUILDING LAYOUT--The student will be able to:

19.01 Read and interpret plot plans.
19.02 Establish building corners.
19.03 Build batter boards and establish building lines and elevations.
19.04 Dig, prepare, and pour footings to local codes and standards.

July 2001
Florida Department of Education
STUDENT PERFORMANCE STANDARDS

Course Number: 8722650
Course Title: Intermediate Masonry 5
Course Credit: 1

COURSE DESCRIPTION:

This course provides students with an in-depth study of foundation building, materials and cost estimations, and power-equipment operation.

20.0 BUILD FOUNDATIONS--The student will be able to:

20.01 Build an 8" block corner 7 courses high.
20.02 Build an 8" block corner to the correct height and range of a given foundation batter board line.
20.03 Bond and build an 8" block corner to the correct height and range on the opposite corner of a given foundation batter board line.
20.04 Pull a line and build an 8" block wall between the block corners.
20.05 Establish and build the other corner leads.
20.06 Build foundation walls to floor elevations.
20.07 Make foundation walls waterproof, if required.
20.08 Install flashing, anchor bolts, termite shields, and weep holes; install vents if a wooden floor system is used.

21.0 ESTIMATE MATERIALS AND COST--The student will be able to:

21.01 Estimate the materials needed for a specific job.
21.02 Estimate the cost of the materials, including the sales tax.

22.0 OPERATE AND MAINTAIN POWER EQUIPMENT--The student will be able to:

22.01 Follow safety practices when using and maintaining power equipment.
22.02 Use a masonry saw with an abrasive blade to cut masonry units.
22.03 Use a masonry saw with a diamond blade to cut masonry units.
22.04 Set up, operate, and maintain power tools and equipment.

July 2001
Florida Department of Education
STUDENT PERFORMANCE STANDARDS

Course Number: 8722660
Course Title: Masonry 6
Course Credit: 1

COURSE DESCRIPTION:

This course is designed to provide students with an in-depth knowledge of concrete masonry. The competencies in this course relate to the use and maintenance of hand and power tools, the preparation of a site, and concrete pouring.

23.0 SELECT, USE, AND MAINTAIN HAND AND POWER TOOLS--The student will be able to:

23.01 Select, use, and maintain the hand tools required for concrete masonry jobs.
23.02 Select, use, and maintain the power tools required for concrete masonry jobs.

24.0 PREPARE A SITE FOR CONCRETE POURING--The student will be able to:

24.01 Excavate and grade the site.
24.02 Erect forms.
24.03 Install a vapor barrier.
24.04 Install reinforcement and expansion materials.
24.05 Install and grade stakes.

25.0 POUR AND FINISH A CONCRETE SLAB--The student will be able to:

25.01 Pour, place, and vibrate (if necessary) concrete.
25.02 Screed to grade.
25.03 Finish concrete.
25.04 Saw control joints, if necessary.
25.05 Protect the slab.
25.06 Clean up tools, equipment, and work area.