Florida Department of Education
Curriculum Framework

Program Title: **Building Construction Specialist**
Career Cluster: **Architecture and Construction**

CCC	
CIP Number	0615100103
Program Type	College Credit Certificate (CCC)
Program Length	18 Credit Hours
CTSO	SkillsUSA
SOC Codes (all applicable)	11-9021 - Construction Managers
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

The purpose of this program is to prepare students for employment as Construction Specialists, Construction Managers, Construction and Building Inspectors, Quality Control Assistant; Scheduler; Materials Tester in the areas of estimating, scheduling, and interpreting plans or to provide supplemental training for persons previously or currently employed in these occupations. It provides a foundation in pursuing a career in building inspection and quality control.

This certificate program is part of the Building Construction Technology (60) AS degree program (1615100102).

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.).

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Architecture and Construction career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Architecture and Construction career cluster.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Communicate effectively.
02.0 Identify issues to look for in order to supervise application of construction materials.
03.0 Draw, read and interpret drawings and specifications.
04.0 Interpret basic designs and apply construction principles.
05.0 Take off quantities and estimate costs.
06.0 Plan, coordinate, schedule and control projects.
07.0 Perform tests and inspections.
08.0 Demonstrate efficient office procedures.
09.0 Demonstrate appropriate math skills.
10.0 Demonstrate appropriate understanding of basic science.
11.0 Demonstrate employability skills.

Florida Department of Education
Student Performance Standards

Program Title: **Building Construction Specialist**
CIP Number: **0615100103**
Program Length: **18 Credit Hours**
SOC Code(s): **11-9021**

This certificate program is part of the Building Construction Technology (60) AS degree program (1615100102). At the completion of this program, the student will be able to:	
01.0	Communicate effectively--The student will be able to:
01.01	Prepare business correspondence.
01.02	Prepare daily project report.
01.03	Prepare requisitions for equipment and materials.
01.04	Prepare minutes from job-site meetings.
01.05	Write logical and understandable statements or phrases to accurately fill out forms/invoices commonly used in business and industry.
01.06	Read and understand graphs, charts, diagrams and tables commonly used in this industry/occupation area.
01.07	Read and follow written and oral instructions.
01.08	Answer and ask questions coherently and concisely.
02.0	Identify issues to look for in order to supervise application of construction materials--The student will be able to:
02.01	Identify appropriate grade of materials.
02.02	Identify mechanical components and equipment.
03.0	Draw, read and interpret drawings and specifications--The student will be able to:
03.01	Take site notes and measurements.
03.02	Interpret structural drawings and specifications.
03.03	Interpret reinforcing steel drawings and bar list.

	03.04 Interpret and apply ASTM standards.
	03.05 Interpret and apply CSA standards.
	03.06 Evaluate shop drawings prior to review by architect or engineer of record.
04.0	Interpret basic designs and apply construction principles--The student will be able to:
	04.01 Plan and coordinate excavation and foundation work.
	04.02 Coordinate and supervise concrete and formwork.
	04.03 Coordinate and supervise staging, scaffolding and falsework.
	04.04 Coordinate and supervise the erection of walls with the rough opening sizes for windows and doors.
	04.05 Coordinate and supervise masonry work.
	04.06 Coordinate and supervise miscellaneous roofing and sheet metal.
	04.07 Coordinate and supervise miscellaneous metal.
	04.08 Coordinate and supervise structural steel work.
	04.09 Coordinate and supervise mechanical work.
	04.10 Coordinate and supervise elevator installation.
	04.11 Coordinate and supervise electrical installation.
	04.12 Coordinate and supervise lath and plaster and dry wall.
	04.13 Coordinate and supervise painting and finishes.
	04.14 Coordinate and supervise tile and terrazzo.
	04.15 Coordinate and supervise the installation of flooring.
	04.16 Coordinate and supervise the installation of carpentry and millwork.
05.0	Take off quantities and estimate costs--The student will be able to:
	05.01 Make calculations.
	05.02 Estimate quantities of concrete.

	05.03 Compile lists of sub-trades for project.
	05.04 Take off quantities of paving.
	05.05 Estimate quantities of rough carpentry.
	05.06 Obtain and build up material costs.
	05.07 Interpret contract document.
	05.08 Estimate quantities of framework.
	05.09 Estimate quantities of excavation and fill.
	05.10 Contact sub trade tenders.
	05.11 Take off quantities of miscellaneous metals.
	05.12 Take off quantities of millwork.
	05.13 Take off quantities of structural steel.
	05.14 Take off quantities of manufactured specialties.
	05.15 Analyze and project general condition costs.
	05.16 Analyze and project labor unit costs.
	05.17 Estimate quantities of reinforcing steel.
	05.18 Estimate quantities of masonry.
	05.19 Analyze and project site overhead costs.
	05.20 Evaluate sub trade bids.
	05.21 Summarize project cost and complete tenders prices.
06.0	Plan, coordinate, schedule and control projects--The student will be able to:
	06.01 Prepare daily time sheets.
	06.02 Record and control materials received.
	06.03 Allocate efficient use of site space.

	06.04 Maintain a clean and orderly construction site.
	06.05 Store materials and equipment.
	06.06 Coordinate and control use of construction tools and equipment.
	06.07 Prepare progress billing.
	06.08 Store chemicals and paints.
	06.09 Prepare work schedules.
	06.10 Prepare material delivery schedules.
	06.11 Expedite delivery of manufactured materials.
	06.12 Analyze productivity.
	06.13 Record deficiencies as a result of project inspections.
	06.14 Prepare coded cost break downs.
	06.15 Take appropriate action to correct project deficiencies.
	06.16 Prepare cash flow schedules.
	06.17 Monitor schedule to control project.
	06.18 Prepare cost reports.
07.0	Perform tests and inspections--The student will be able to:
	07.01 Check concrete placing and consolidation procedures.
	07.02 Check form work.
	07.03 Check reinforcing steel and placing.
	07.04 Inspect placing of fill and compaction procedures.
	07.05 Verify data from tests conducted by independent testing companies.
08.0	Demonstrate efficient office procedures--The student will be able to:
	08.01 Organize work area.

	08.02 Select and use appropriate forms.
	08.03 Develop and maintain filing system.
	08.04 Maintain inventory of physical assets.
	08.05 Set up and maintain technical reference library.
	08.06 Maintain a system for field work authorizations.
	08.07 Maintain a system for back charges.
	08.08 Interpret basic company accounting procedures.
09.0	Demonstrate appropriate math skills--The student will be able to:
	09.01 Solve problems for volume, weight, area, circumference and perimeter measurements for rectangles, squares and cylinders.
	09.02 Measure tolerance(s) on horizontal and vertical surfaces using millimeters, centimeters, feet and inches.
	09.03 Add, subtract, multiply and divide using fractions, decimals and whole numbers.
	09.04 Determine the correct purchase price, to include sales tax for a materials list containing a minimum of six items.
	09.05 Demonstrate an understanding of federal, state and local taxes and their computation.
10.0	Demonstrate appropriate understanding of basic science--The student will be able to:
	10.01 Understand molecular action as a result of temperature extremes, chemical reaction and moisture content.
	10.02 Draw conclusions or make inferences from data.
	10.03 Understand pressure measurement in terms of PSI.
11.0	Demonstrate employability skills--The student will be able to:
	11.01 Conduct a job search.
	11.02 Secure information about a job.
	11.03 Identify documents which may be required when applying for a job interview.
	11.04 Complete a job application.
	11.05 Demonstrate competence in job interview techniques.

11.06	Identify or demonstrate appropriate responses to criticism in the workplace.
11.07	Identify acceptable work habits.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Career and Technical Student Organization (CTSO)

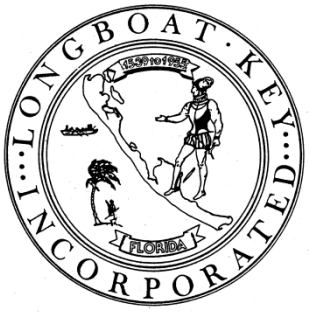
SkillsUSA is the intercurricular career and technical student organization for providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. The activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.065, F.A.C.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Additional Resources

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:
http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml



End of Agenda Item