

Building Technology

Program Design Summary

Program Information

Organization	Washburn Institute of Technology
Program Number	46.0401
Instructional Level	Certificate
Instructional Area	Building Trades
Last Revision Date	5/27/2009

Target Population

Grades 11, 12, and Postsecondary

Description

This program prepares individuals to apply technical knowledge and skills in Building Technology. The knowledge and skills address maintenance of a building's function and service within a variety of structures - commercial and residential. Instruction includes basic theory and hands-on laboratory in electrical, carpentry, plumbing and heating ventilation and air conditioning. Upon completion are qualified for employment in the construction and maintenance of hospitals, motels, apartment complexes, schools, and other businesses. Students have the opportunity to earn EPA Section 608 Certification.

Indirect Measures

1. Rating of 3 or 4 on the program competency profile.
2. Complete and pass the EPA Section 608 Certification.
3. The Safety Test must be passed at 100% prior to participation in laboratory coursework.

Entry Requirements

1. Complete and pass the general entrance assessment, WorkKeys, at a Level 4 in Applied Math and Reading for Information.
2. Prerequisite for HVAC BT220 and BT225 HVAC Lab, students must successfully complete Basic Electrical BT110 and BT115 Basic Electrical Lab.

Evaluation Summary

Grading Criteria:

Lab Grade - 50% of course grade

66.7% Lab Work +33.3% Daily Lab Grade

Classroom Grade - 50% of course grade

54.5% Unit Grade; 18.2% Notebook; 27.3% Daily Classroom Grade

Total Percentage = 50% Lab Grade + 50% Classroom Grade

Makeup Policy:

Students are expected to be in class everyday. The program curriculum prepares a student for a entry-level work environment. Essential material and class application is covered daily and difficult to makeup when not in attendance. If a student is absent they must notify the instructor before or on the day of the absence. If a student meets the notification requirements, students will be assigned makeup work. All makeup work must be completed within two (2) weeks of the absence.

ADA Statement:

The Special Support Services (SSS) Office is responsible for assisting in arranging accommodations and for identifying resources at KATS for persons with disabilities. Qualified students with disabilities MUST register and provide documentation with the office to be eligible for services. New requests for accommodations should be submitted two months or more prior to the date services should begin; however, contact the SSS Office as soon as a need may arise. Depending on the accommodation request, four to eight weeks lead time may be needed for timely and effective provision of services. SSS coordinates and assist in arranging services it deems appropriate for eligible students on a case-by-case basis.

If you are a student with a disability that may substantially limit your ability to participate in this class and believe you will need accommodations, it is your responsibility to contact:

Who:Special Support Services Coordinator
Location:Career Resource Center, Room 300
Phone:785-228-6356)
E-Mail:mnelson@kats.tec.ks.us

Student may voluntarily identify themselves to the instructor for a referral to the Special Support Services Coordinator.

Program Outcomes

- A. Learn and apply safe work habits in the classroom and laboratory.
- B. Learn and apply basic knowledge of the use and care of hand and power tools related to this field.
- C. Maintain 90% or better attendance.
- D. Demonstrate professional and quality workmanship in the classroom and laboratory assignments.
- E. Apply essential math skills for all areas in building trades.

Core Abilities

- A. Communicate effectively.
- B. Integrate technology.
- C. Learn effectively - use academics effectively.
- D. Demonstrate cooperative/teamwork skills
- E. Apply Safety
- F. Think critically and creatively
- G. Demonstrate responsible work ethics

Course Configuration						
Semester	Course #	Course Title	Credits	Contact Hrs	Category	Req?
	BDT110	Basic Electricity	6	0	Core Course	Yes
	BDT115	Basic Electrical Lab	6	0	Core Course	Yes
	BDT120	Basic Carpentry	6	0	Core Course	Yes
	BDT125	Basic Carpentry Lab	6	0	Core Course	Yes
	BDT210	Plumbing Basics	6	0	Core Course	Yes
	BDT215	Plumbing Basics Lab	6	0	Core Course	Yes
	BDT220	HVAC	5	0	Core Course	Yes

	BDT225	HVAC Lab	6	0	Core Course	Yes
	BDT230	Workplace Skills	1	0	Core Course	Yes
	BDT240	Building Technology On the Job Training	3	0	Elective	No

Program Course Detail

Course A -- Basic Electricity

Course Number	BDT110
Credits	6
Contact Hours	0
Total Hours	90
Category	Core Course
Required	Yes
Course Description	Through a variety of classroom and/or shop/lab learning and assessment activities, students in this eighteen-week course will: explore Basic Electrical Theory, Electrical Safety Residential Wiring Methods and Code Compliance. Electrical and shop safety is emphasized in classroom and lab activities.

Course B -- Basic Electrical Lab

Course Number	BDT115
Credits	6
Contact Hours	0
Total Hours	180
Category	Core Course
Required	Yes
Course Description	Through a variety of classroom and/or shop/lab learning and assessment activities, students in this eighteen-week course will explore Basic Electrical Theory, Electrical Safety Residential Wiring Methods and Code Compliance. The course offers application of classroom study and practical experience with simulated and real wiring situations. Electrical and shop safety is stressed throughout the course.

Course C -- Basic Carpentry

Course Number	BDT120
Credits	6
Contact Hours	0
Total Hours	90
Category	Core Course
Required	Yes
Course Description	Through a variety of classroom and/or shop/lab learning and assessment activities, students in this eighteen-week course will explore building trade codes and permits, handling concrete, framing, and finishing. Students will become familiar with carpentry tools, construction tools, and instruments. Knowledge will be acquired so a student will be able to perform the steps in

constructing a building in BT125 Basic Carpentry Lab. Safety will be stressed throughout the course.

Course D -- Basic Carpentry Lab

Course Number	BDT125
Credits	6
Contact Hours	0
Total Hours	180
Category	Core Course
Required	Yes
Course Description	Through a variety of classroom and/or shop/lab learning and assessment activities, students in this eighteen-week lab course will: implement building codes and permits, work with concrete, framing, and finishing. Students will become familiar with tools of the trade in carpentry, construction, and instrumentation. Knowledge and skill will be acquired so a student will be able to perform steps in constructing a building. Safety is a primary component and will be implemented heavily throughout the course.

Course E -- Plumbing Basics

Course Number	BDT210
Credits	6
Contact Hours	0
Total Hours	90
Category	Core Course
Required	Yes
Course Description	Through a variety of classroom and/or shop/lab learning and assessment activities, students in this eighteen-week course will explore the components in the plumbing field. Curriculum includes tools, materials, equipment, processes, and career opportunities. Real-work plumbing situations are discussed with application in the lab course, BT215. Plumbing tool and shop safety is stressed.

Course F -- Plumbing Basics Lab

Course Number	BDT215
Credits	6
Contact Hours	0
Total Hours	180
Category	Core Course
Required	Yes
Course Description	Through a variety of classroom and/or shop/lab learning and assessment activities, students in this eighteen-week lab course will: apply knowledge in plumbing tools, materials, equipment, and processes in simulations and real-work environments. Plumbing tool and shop safety is stressed throughout the course.

Course G -- HVAC

Course Number	BDT220
Credits	5
Contact Hours	0
Total Hours	75
Category	Core Course
Required	Yes
Course Description	Through a variety of classroom and/or shop/lab learning and assessment activities, students in this eighteen-week course will explore the components of HVAC with basic information about tools, materials, equipment, processes and career opportunities. The course offers classroom study with real HVAC situations. HVAC tool and shop safety is stressed throughout the course. Students are provided the opportunity to prepare and complete the examination for EPA Section 608 Technician Certification.

Course H -- HVAC Lab

Course Number	BDT225
Credits	6
Contact Hours	0
Total Hours	180
Category	Core Course
Required	Yes
Course Description	Through a variety of classroom and/or shop/lab learning and assessment activities, students in this eighteen-week course will apply knowledge from BT220. Topics include application of HVAC tools, materials, equipment, and processes. The course offers classroom study along with practical experience with real HVAC situations. HVAC tool and shop safety is stressed throughout the course. Students have the opportunity to prepare and complete the test for EPA Section 608 Technician Certification.

Course I -- Workplace Skills

Course Number	BDT230
Credits	1
Contact Hours	0
Total Hours	15
Category	Core Course
Required	Yes
Course Description	Students will attend Job-Readiness Workshops through the Career Resource Center. Students will achieve Level 5 in Applied Math and Reading For Information utilizing Key Train Software. Students will be expected to produce a resume, letter of application, and complete an application form at the conclusion of the course.

Course J -- Building Technology On the Job Training

Course Number	BDT240
Credits	3

Contact Hours	0
Total Hours	135
Category	Elective
Required	No
Course Description	On-the-job training is an optional course that is available to students that have completed 100% of the program competencies and maintained at least 90% attendance. The student must be in good standing and have the recommendation of the instructor and Associate Director of Student Services. The job must be a paid position that is directly related to Building Technology.