

ELECTRONICS HVAC MACHINE TOOL / CNC TECHNOLOGY RESIDENTIAL CARPENTRY WELDING



FIRE SCIENCE HEALTH SERVICES ASSISTANT METAL FABRICATION RESIDENTIAL WIRING

Jefferson College 

# AREA TECHNICAL SCHOOL

## Career Guide

2011-2012

CAREER EDUCATION OPPORTUNITIES  
FOR HIGH SCHOOL STUDENTS



1000 Viking Drive • Hillsboro, MO 63050  
636.797.3000 • [www.jeffco.edu](http://www.jeffco.edu)

AUTOMOTIVE TECHNOLOGY BUSINESS MANAGEMENT CHILDCARE CULINARY ARTS



BUILDING REPAIR TECHNOLOGY COMPUTER AIDED DRAFTING DIGITAL MEDIA TECHNOLOGY

# **NON-DISCRIMINATION POLICY**

## **Non-Discrimination Notice**

It is the policy of Jefferson College that no person shall, on the basis of age, ancestry, color, creed, disability, gender, national origin, race, religion, or veteran status, be subject to discrimination in employment or in admission to any educational program or activity of the College.

In compliance with Federal Rules and Regulations, Jefferson College has adopted a procedure for resolving complaints of discrimination. The procedure is available to any Jefferson College student, employee, or applicant who feels that he or she has been discriminated against in employment, student programs, or student activities.

The designated College official for any alleged discriminatory act or occurrence falling within the provisions of any of the Federal Rules and Regulations other than Title IX as specified above is the College Affirmative Action Officer, Tasha Welsh, Office - Administration 133-E, telephone number (636) 797-3000/942-3000, ext. 157. The Americans with Disabilities Act (ADA) coordinator for students is Sundaye Harrison, Office - Library 110, ext. 169.

The designated College official for any alleged discriminatory act or occurrence falling within the provisions of Title IX of the 1972 Education Act is the College Coordinator of Title IX, Patricia Loomis, Office - AS11408, telephone number (636) 797-3000/942-3000, ext. 349.

Copies of the Jefferson College Board of Trustees "Procedure for Resolving Complaints of Discrimination" may be obtained in the Office of the President, the Office of the Dean of Student Services, or in the Office of the Director of Human Resources.



## CAREER EDUCATION PROGRAMS

Students enrolled in career and academic programs at the Area Technical School receive high school credit from their sending high school. Students enrolled in a college-level program earn dual credit. These students earn high school credit through their sending high school and college credit is granted for each career program designated as dual credit. The number of college credits earned varies based on the career and technical education program.



Jefferson College

# AUTOMOTIVE TECHNOLOGY



**ATS**  
AREA TECHNICAL SCHOOL

# **AUTOMOTIVE TECHNOLOGY**

## **(SENIORS)**

### **A.M. AND P.M.**

The instruction in Automotive Technology begins with Automotive Shop Safety. In this course the student will complete an on-line curricula and jack and properly support vehicles. In addition, the student will use twin post frame contact lifts and runway ramp style lifts with swing arm jacks. The proper use of bench grinders, power tools and power shop washers will be covered as they pertain to the automotive shop.

In Automotive Engines I students will be placed on teams which will completely disassemble the engine block and cylinder head, clean all components, and measure components to determine wear and part replacement. In Automotive Engines II the student team will reassemble the engine and test engine for oil pressure. Additional activities include: oil changes, cooling system and transmission flushes, tune-ups, tire rotations and compression tests.

In the spring semester students will begin the study of automotive brake systems. Students will learn the hydraulic system and repair disc and drum systems. Repairs will include brake system overhaul, machining drums, machining rotors both on and off the car, packing and adjusting wheel bearings and adjusting brakes and bleeding the brake system. The Antilock Brake System (ABS) is covered in this course.

The second half of the spring semester students will study the automotive steering and suspension system. In this course students will study rack and pinion steering and the recirculating ball gearbox and related linkage for both systems. This course covers suspension system currently in use on today's vehicles. Students will replace various suspension system components and prepare the vehicle for wheel alignment. Two wheel and four wheel alignment angles are covered and the student will perform alignments.

Students enrolled in a Career Education Program are expected to conduct themselves in a professional manner. Students must be able to follow instructions and work as a member of a team to achieve the course objectives. Students are expected to be accurate, have a positive attitude and maintain good attendance throughout the school year.

Instruction will involve both classroom and laboratory experiences with home study required.

#### **Recommended High School Classes**

Applied/General Mathematics  
General Shop

Algebra/Geometry  
Physical Science

Keyboarding

These classes are not established as pre-requisites. Students that have been successful in any of these courses have historically demonstrated a higher degree of success in this career education program.

#### **Estimated Tool/Supply Requirement:**

The student is required to purchase a pair of clear safety glasses and two Jefferson College Automotive shirts available in the Bookstore on the Hillsboro campus. Phone orders accepted.

**Automotive Technology**  
**Schedule of Classes 2011-2012**

**YEAR 1 - 1ST SEMESTER**

**MONDAY**

Auto Shop Safety  
Auto Engines I  
Auto Engines II

**TUESDAY**

Auto Shop Safety  
Auto Engines I  
Auto Engines II

**WEDNESDAY**

Auto Shop Safety  
Auto Engines I  
Auto Engines II

**THURSDAY**

Auto Shop Safety  
Auto Engines I  
Auto Engines II

**FRIDAY**

Auto Shop Safety  
Auto Engines I  
Auto Engines II

**YEAR 1 - 2ND SEMESTER**

**MONDAY**

Auto Brake Systems  
Auto Steering  
& Suspension

**TUESDAY**

Auto Brake Systems  
Auto Steering  
& Suspension

**WEDNESDAY**

Auto Brake Systems  
Auto Steering  
& Suspension

**THURSDAY**

Auto Brake Systems  
Auto Steering  
& Suspension

**FRIDAY**

Auto Brake Systems  
Auto Steering  
& Suspension

**ONE YEAR PROGRAM - SENIORS ONLY**



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# **BUILDING REPAIR TECHNOLOGY**



**ATS**  
AREA TECHNICAL SCHOOL

# **BUILDING REPAIR TECHNOLOGY**

## **(SOPHOMORES, JUNIORS, & SENIORS)**

### **A.M. AND P.M.**

The Building Repair Technology program prepares students to be skilled building repair technicians. Students are provided experience in assembly, installation, maintenance, and repair of systems within residential and commercial buildings. Classroom and laboratory instruction include opportunities for students to work with metals, wood, stone, brick, glass, concrete, and composition substances. The student will also learn installation and repair of various mechanical and electrical systems and the proper use of a variety of hand and power tools as well as how to read blueprints and follow technical specifications. Students will also receive the opportunity to learn various welding techniques.

Successful completion of the program may lead to various types of skilled employment in such careers as building maintenance worker, building service mechanic, carpenter, plumber, electrician, and painter. The training experience may also be used as preparation for additional technical education in various college level programs.

Student must be enrolled as a high school sophomore or junior. The student must have a basic understanding of the following mathematical concepts: addition, subtraction, multiplication and division. The student should understand and be functional in these concepts as they pertain to whole numbers, fractions and decimals.

Students enrolled in a Career Education Program are expected to conduct themselves in a professional manner. Students must be able to follow instructions and work as a member of a team to achieve the course objectives. Students are expected to be accurate, have a positive attitude and maintain good attendance throughout the school year.

Instruction will involve both classroom and laboratory experiences with home study required.

#### **Recommended High School Courses:**

General Shop  
Woodworking

Applied Math

Career Exploration

These courses are not established as pre-requisites. Students that have been successful in any of these courses have historically demonstrated a higher degree of success in this career education program.

**Estimated Tool/Supply Requirement:** Safety Glasses, daily school supplies (paper, notebook, etc.)

# Building Repair Technology

## Schedule of Classes 2011-2012

### YEAR 1 - 1ST SEMESTER

**MONDAY**  
Building Repair  
Technology I  
Applied Math I  
Applied Comm I

**TUESDAY**  
Building Repair  
Technology I

**WEDNESDAY**  
Building Repair  
Technology I  
Applied Math I  
Applied Comm I

**THURSDAY**  
Building Repair  
Technology I

**FRIDAY**  
Building Repair  
Technology I

### YEAR 1 - 2ND SEMESTER

**MONDAY**  
Building Repair  
Technology II  
Applied Math II  
Applied Comm I

**TUESDAY**  
Building Repair  
Technology II

**WEDNESDAY**  
Building Repair  
Technology II  
Applied Math II  
Applied Comm II

**THURSDAY**  
Building Repair  
Technology II

**FRIDAY**  
Building Repair  
Technology II

### YEAR 2 – 1st SEMESTER

**MONDAY**  
Building Repair  
Technology III  
Applied Comm II

**TUESDAY**  
Building Repair  
Technology III

**WEDNESDAY**  
Building Repair  
Technology III  
Applied Comm III

**THURSDAY**  
Building Repair  
Technology III

**FRIDAY**  
Building Repair  
Technology III

### YEAR 2 – 2nd SEMESTER

**MONDAY**  
Building Repair  
Technology IV  
Applied Comm IV

**TUESDAY**  
Building Repair  
Technology IV

**WEDNESDAY**  
Building Repair  
Technology IV  
Applied Comm IV

**THURSDAY**  
Building Repair  
Technology IV

**FRIDAY**  
Building Repair  
Technology IV

### YEAR 3 – 1st and 2nd SEMESTERS

**MONDAY**  
Building Repair  
Technology V & VI

**TUESDAY**  
Building Repair  
Technology V & VI

**WEDNESDAY**  
Building Repair  
Technology V & VI

**THURSDAY**  
Building Repair  
Technology V & VI

**FRIDAY**  
Building Repair  
Technology V & VI



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# **BUSINESS MANAGEMENT**



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AREA TECHNICAL SCHOOL

# **BUSINESS MANAGEMENT**

## **(JUNIORS & SENIORS)**

### **A.M. ONLY**

The instruction in Business Management includes the study of management and functions, organizational structures, leadership, planning, the stimulation of change within an organization and relationships between subordinates and superiors.

Topics in Marketing will center on the mix of the elements of product, price, distribution and promotion.

Retailing instruction will present the organization, management, and operation of retail institutions with emphasis on merchandising for improvement of inventory and financial control.

Topics in Salesmanship will provide an overview of selling as a process that provides benefit to both buyers and sellers. Retail and industrial sales presentations will be emphasized as a part of the course.

The study of Business Mathematics is also a portion of the program with topics covered such as trade and cash discounts, pricing merchandise, depreciation, financial statement analysis, and simple and compound interest.

Introduction and “hands-on” experience with the four most common microcomputer software programs: Power Point, word processing, database, and spreadsheet functions are provided to develop the student’s understanding of these four programs.

The student must be enrolled as a junior or senior in high school. The student must have a basic understanding of the following mathematical concepts: addition, subtraction, multiplication and division, as they pertain to whole numbers, fractions and decimals.

Students enrolled in a Career Education Program are expected to conduct themselves in a professional manner. Students must be able to follow instructions and work as a member of a team to achieve the course objectives. Students are expected to be accurate, have a positive attitude and maintain good attendance throughout the school year. Instruction will involve both classroom and laboratory experiences with home study required.

#### **Recommended High School Courses:**

Bookkeeping  
Accounting

Applied Mathematics  
Keyboarding

Business Technology  
Marketing Education

These classes are not established as pre-requisites. Students that have been successful in any of these courses have historically demonstrated a higher degree of success in this career education program.

#### **Estimated Tool/Supply Requirement:**

1st Semester – Basic Calculator \$10.00 and Student Planner \$4.00

2nd Semester – Jump Drive \$10.00

**Total estimated cost: \$24.00**



**Business Management**  
**Schedule of Classes 2011-2012**  
**YEAR 1 - 1ST SEMESTER**

**MONDAY**

Principals of Management  
Business Math

**TUESDAY**

Marketing

**WEDNESDAY**

Principles of Management  
Business Math

**THURSDAY**

Marketing

**FRIDAY**

Principals of Management  
Business Math

**YEAR 1 - 2ND SEMESTER**

**MONDAY**

Retailing  
Microcomputer Software  
Apps

**TUESDAY**

Salesmanship

**WEDNESDAY**

Retailing  
Microcomputer Software  
Apps

**THURSDAY**

Salesmanship

**FRIDAY**

Retailing  
Microcomputer Software  
Apps

**YEAR 2 – 1st SEMESTER**

**MONDAY**

Advertising  
Business Communications

**TUESDAY**

Financial Management

**WEDNESDAY**

Advertising  
Business Communications

**THURSDAY**

Financial Management

**FRIDAY**

Advertising  
Business Communications

**YEAR 2 – 2nd SEMESTER**

**MONDAY**

Human Relations &  
Business & Industry  
Job Search Pro  
Professional Image

**TUESDAY**

Bookkeeping

**WEDNESDAY**

Human Relations &  
Business & Industry  
Job Search Pro  
Professional Image

**THURSDAY**

Bookkeeping

**FRIDAY**

Human Relations &  
Business & Industry  
Job Search Pro  
Professional Image

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# COMPUTER INTEGRATED MANUFACTURING



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# COMPUTER INTEGRATED MANUFACTURING: (SENIORS) A.M.

In this program students will learn integration in industrial manufacturing which is the key to providing high precision and intricate machined metals parts into the world's growing demand for extremely technical design. With the assistance of computer aided drafting and computer aided manufacturing (CAD/CAM) the gap between manufacturing and engineering tightens. The results of this integration are higher standards of precision and quality along with programming, set-up, and machine cycle time reduction of CNC machining centers and turning centers.

Students enrolled in a Career Education program are expected to conduct themselves in a professional manner. Students must be able to follow instructions and work as a member of a team to achieve the course objectives. Students are expected to be accurate, have a positive attitude and maintain good attendance throughout the school year.

## Recommended High School Courses:

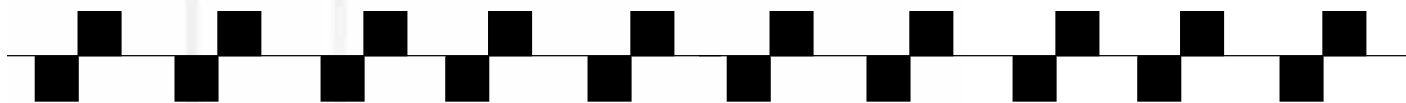
General Shop	Applied Math/Algebra	Career Exploration
General Metals	CAD	

These courses are not established as pre-requisites. Students that have been successful in any of these courses have historically demonstrated a higher degree of success in this career education program.

## Estimated Tool/Supply Requirement:

Safety glasses

Daily school supplies (paper, notebook, etc.)



## Computer Integrated Machine Schedule of Classes 2011-2012

### YEAR 1 - 1ST SEMESTER

#### MONDAY

Intro Machining  
Procedures  
CNC Programming I

#### TUESDAY

Industrial Blueprint Read

#### WEDNESDAY

Intro Machining  
Procedures  
CNC Programming I

#### THURSDAY

Industrial Blueprint Read

#### FRIDAY

Intro Machining  
Procedures  
CNC Programming I

### YEAR 1 - 2ND SEMESTER

#### MONDAY

Machining Procedures  
CNC Program. II

#### TUESDAY

Industrial Math

#### WEDNESDAY

Machining Procedures  
CNC Program. II

#### THURSDAY

Industrial Math

#### FRIDAY

Machining Procedures  
CNC Program. II

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# CULINARY ARTS



**ATS**  
AREA TECHNICAL SCHOOL

# **CULINARY ARTS**

## **(SOPHOMORES, JUNIORS, & SENIORS)**

### **A.M. AND P.M.**

This course is designed for the student who wishes to learn the culinary arts and prepare for a career in food preparation in a hotel, club, or restaurant environment. With an emphasis placed on the fundamentals of the culinary arts, the student will also learn the fundamentals of restaurant and banquet service.

Areas of study include kitchen safety, sanitation, baking and pastry, purchasing and receiving, accounting and cost control, supervisory development, meat fabrication, soups, stocks and sauces, and menu design and preparation.

Students will also be eligible to receive sanitation certification from the National Restaurant Association.

Instruction stresses quality food preparation techniques and creative food presentation styles. The skills learned in this class, if not utilized as a career choice, will be beneficial throughout life when planning family meals.

Students who successfully complete the program may find skilled careers as a line cook, prep cook, server, server assistant, or host/hostess. This program is an excellent jump start for a postsecondary culinary arts education.

#### **COURSE OBJECTIVES:**

- To develop a working knowledge of the basic principles of the culinary arts.
- To develop safe work habits in utilizing the tools and equipment of the trade.
- To develop sanitary work habits for use in the lab and throughout the student's career.
- To develop a sense of pride in workmanship of the foods created.
- To develop an understanding of food science
- To develop a working knowledge of nutrition and dietary needs.

#### **COURSE TOPICS:**

- Safety in the work place
- Food service sanitation
- Basic kitchen terminology
- Weights, measures, and conversions
- Equipment identification
- OSHA and ADA requirements
- Creativity in presentation
- Baking and pastries
- Breakfast preparation
- Product identification and preparation
- Entree preparation
- Vegetable and starch preparation
- Meat, poultry and seafood fabrication
- Soups, stocks, and sauces
- Beverage preparation and service
- Table service
- Appetizers, hors d oeuvres, and canapés
- Salads and sandwiches
- Banquet organization and preparation
- Restaurant accounting and cost control
- Nutrition and diet therapy
- Purchasing and receiving
- Supervisory development
- International cuisine

The student must be enrolled as a high school sophomore, junior or senior. The student must have a basic understanding of the following mathematical concepts: addition, subtraction, multiplication and division. The student should understand and be functional in these concepts as they pertain to whole numbers, fractions and decimals.

Students enrolled in a Career Education Program are expected to conduct themselves in a professional manner. Students must be able to follow instructions and work as a member of a team to achieve the course objectives. Students are expected to be accurate, have a positive attitude and maintain good attendance throughout the school year.

Instruction will involve both classroom and laboratory experiences with home study required.

### **Recommended High School Courses:**

Family and Consumer Sciences  
Applied Math through Algebra  
Art Fundamentals

These courses are not established as pre-requisites. Students that have been successful in any of these courses have historically demonstrated a higher degree of success in this career education program.

### **Estimated Instructional Materials Requirement:**

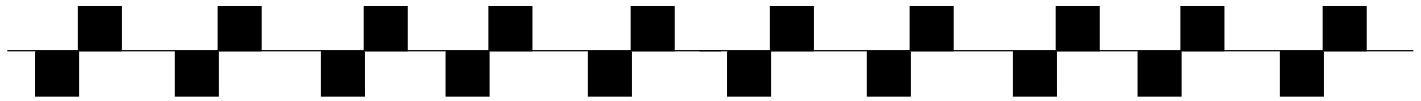
Blue or black ink pen  
Loose leaf paper  
3-ring binder  
Textbook (provided)  
Culinary Arts uniform (2 jackets, 1 chef pants, 2 aprons, 1 hat)  
Hepatitis A vaccinations (series of 2 shots) available through your doctor or the local Health Department  
SkillsUSA membership dues (\$15.00)

### **Total Estimated Cost: \$100.00**

Students will receive a letter during the summer detailing uniform ordering procedures.

*(Area Technical School Seniors, who have completed two years of the Culinary Arts Program, along with the recommendation of the ATS Culinary Arts Instructor, have the opportunity to continue their Culinary Arts education after normal ATS hours if their sending school allows them to enroll in the third and fourth semesters of the Jefferson College Culinary Arts late afternoon program. Students will need to provide their own transportation.)*





**Culinary Arts**  
Schedule of Classes 2011-2012

**YEAR 1 - 1ST SEMESTER**

**MONDAY**

Applied Math  
Applied Comm I

**TUESDAY**

Applied Math  
Applied Comm I

**WEDNESDAY**

Culinary Arts I

**THURSDAY**

Culinary Arts I

**FRIDAY**

Culinary Arts I

**YEAR 1 - 2ND SEMESTER**

**MONDAY**

Applied Math  
Applied Comm I

**TUESDAY**

Applied Math  
Applied Comm I

**WEDNESDAY**

Culinary Arts I

**THURSDAY**

Culinary Arts I

**FRIDAY**

Culinary Arts I

**YEAR 2 - 1st SEMESTER**

**MONDAY**

Culinary Arts II  
Applied Comm II

**TUESDAY**

Culinary Arts II  
Applied Comm II

**WEDNESDAY**

Culinary Arts II

**THURSDAY**

Culinary Arts II

**FRIDAY**

Culinary Arts II

**YEAR 2 - 2nd SEMESTER**

**MONDAY**

Culinary Arts II  
Applied Comm II

**TUESDAY**

Culinary Arts II  
Applied Comm II

**WEDNESDAY**

Culinary Arts II

**THURSDAY**

Culinary Arts II

**FRIDAY**

Culinary Arts II



**Culinary Arts - College Level**  
Schedule of Classes 2011-2012

**YEAR 3 - 1ST SEMESTER**

**TUESDAY**

Culinary Arts III

**THURSDAY**

Culinary Arts III

**YEAR 3 - 2ND SEMESTER**

**TUESDAY**

Culinary Arts IV

**THURSDAY**

Culinary Arts IV

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# DIGITAL MEDIA TECHNOLOGY



**ATS**  
AREA TECHNICAL SCHOOL

# DIGITAL MEDIA TECHNOLOGY

## (JUNIORS & SENIORS)

### A.M. AND P.M.

The Digital Media Technology Program combines classroom experience with real-world projects; this interdisciplinary program is designed for students seeking employment in information technology careers, including, but not limited to: web design, digital media and motion graphics creation, photo manipulation, programming for the web, and installation and repair of microcomputer systems. Some of the software program used to gain this experience include: Adobe Photoshop, DreamWeaver, Adobe Illustrator, Adobe Flash, Adobe Premiere, and Adobe After Effects.

**DIGITAL MEDIA:** This hands-on class covers fundamental theories and methods of computer use in art, computer assisted imagery and multi-sensory, interactive processing, and creating 2D and 3D media. Students will use various software programs to produce and present quality multimedia presentations.

**INTRODUCTION TO PHOTOSHOP:** Master the skills and techniques in graphic design to and construct graphics which could be added to web pages or Flash applications. Students will learn the basics to manipulating photos and other graphics.

**INTRODUCTION TO VISUAL BASIC PROGRAMMING:** Introduction to Visual BASIC Programming is an introductory course in event driven programming in the Microsoft Visual BASIC language; a popular Microsoft Windows based programming language. Students will learn the full range of this language through lectures and programming projects.

**FLASH:** Hands-on experience with Adobe Flash as used in a typical Web/Graphics design environment. Master the basics of drawing, creating animations, and manage Flash tools. Manage and use libraries, organize projects, create interactive buttons, add sounds, and publish movies. Integrate graphics from other sources including Photoshop and Illustrator.

**PROGRAMMING LOGIC:** Programming Logic develops analytical skills using structured programming design methods to solve practical business problems. This course allows the student to acquire the skills to program in many different languages.

**WEB DEVELOPMENT:** Dreamweaver allows students to master these web development tools. The skills in this class provide a method for fast development of web pages and graphics. Students will develop skills to construct basic web design structures, including frames, tables, forms, and graphics, using HTML and CSS.

**PROGRAMMING FOR THE WEB:** Programming for the Web builds programming skills used to develop technical skills that include web development and other interactive media.

Students enrolled in a Career Education Program are expected to conduct themselves in a professional manner. Students must be able to follow instructions and work as a member of a team to achieve the course objectives. Students are expected to be accurate, have a positive attitude and maintain good attendance throughout the school year.

Instruction will involve both classroom and laboratory experiences with home study required.

#### **Recommended High School Courses:**

Keyboarding

Computer Related Classes

Web Design

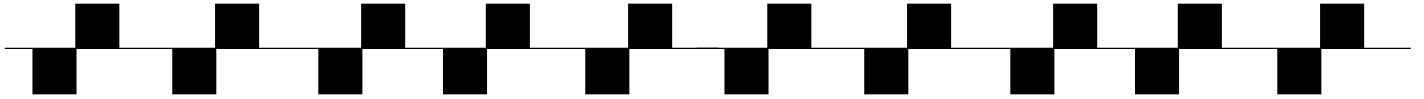
Applied Mathematics

Communications

Photo Editing

These are not established as pre-requisites. Students that have been successful in any of these courses have historically demonstrated a higher degree of success in this career education program.

**Tool Requirements:**  
Jump Drive/Thumb Drive



## **Digital Media Technology**

### **Schedule of Classes 2011-2012**

#### **YEAR 1 - 1ST SEMESTER**

**MONDAY**  
Intro Photo Shop

**TUESDAY**  
Programming Logic

**WEDNESDAY**  
Intro Photo Shop

**THURSDAY**  
Programming Logic

**FRIDAY**  
Intro Photo Shop

#### **YEAR 1 - 2ND SEMESTER**

**MONDAY**  
Intro to Visual Basic

**TUESDAY**  
Intro to Flash

**WEDNESDAY**  
Intro to Visual Basic

**THURSDAY**  
Intro to Flash

**FRIDAY**  
Intro to Visual Basic

#### **YEAR 2 – 1st SEMESTER**

**MONDAY**  
Dreamweaver

**TUESDAY**  
Digital Media I or  
Intro Computer Support

**WEDNESDAY**  
Dreamweaver

**THURSDAY**  
Digital Media I or  
Intro Computer Support

**FRIDAY**  
Dreamweaver

#### **YEAR 2 – 2nd SEMESTER**

**MONDAY**  
Programming for the Web

**TUESDAY**  
Digital Media II or  
Adv. Computer Support

**WEDNESDAY**  
Programming for the Web

**THURSDAY**  
Digital Media II or  
Adv. Computer Support

**FRIDAY**  
Programming for the Web

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# EARLY CHILDHOOD & ELEMENTARY EDUCATION



**ATS**  
AREA TECHNICAL SCHOOL

# **EARLY CHILDHOOD & ELEMENTARY EDUCATION**

## **(JUNIORS & SENIORS)**

### **A.M.**

This program provides students with the background and professional competencies necessary for employment in the field of early childhood care and elementary education. Instruction includes topics in child health, nutrition and safety, infant/toddler care, and principles of child growth and development. Additional laboratory experiences are provided with direct interaction with young children under qualified supervision in the campus Child Care Center or other approved sites within the county. This course of study also may lead to a career in teacher education for students desiring to obtain a teaching certificate from a four-year university. The student must be enrolled as a junior or senior in high school. Articulation agreements with the University of Missouri St. Louis and Missouri Baptist University allow for the high school senior to transfer credits to these institutions towards a Bachelor's degree in Early Childhood Education.

#### **Recommended High School Courses:**

Family & Consumer Sciences                      Health                      Child Development

These are not established as pre-requisites. Students that have been successful in any of these courses have historically demonstrated a higher degree of success in this career education program.

#### **Estimated Course/Materials Requirements:**

Students will be required to purchase a minimum of one program shirt to be worn in labs. A student can purchase additional shirts and/or hoody. The approximate cost of a shirt is \$10.00 and a hoody is \$13.00.



## Early Childhood Education Schedule of Classes 2011-2012

### YEAR 1 - 1ST SEMESTER

<b>MONDAY</b> Intro Early Child Edu.	<b>TUESDAY</b> Intro Early Child Edu.	<b>WEDNESDAY</b> Intro Early Child Edu.	<b>THURSDAY</b> Intro Early Child Edu.	<b>FRIDAY</b> Intro Early Child Edu.
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### YEAR 1 - 2ND SEMESTER

<b>MONDAY</b> Early Childhood Lab	<b>TUESDAY</b> Early Childhood Lab	<b>WEDNESDAY</b> Early Childhood Lab	<b>THURSDAY</b> Early Childhood Lab	<b>FRIDAY</b> Early Childhood Lab
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### YEAR 2 – 1st SEMESTER

<b>MONDAY</b> Child Hlth, Nutr/Safety	<b>TUESDAY</b> Child Hlth, Nutr/Safety	<b>WEDNESDAY</b> Child Hlth, Nutr/Safety	<b>THURSDAY</b> Child Hlth, Nutr/Safety	<b>FRIDAY</b> Child Hlth, Nutr/Safety
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### YEAR 2 – 2nd SEMESTER

<b>MONDAY</b> ECE Practicum I	<b>TUESDAY</b> ECE Practicum I	<b>WEDNESDAY</b> ECE Practicum I	<b>THURSDAY</b> ECE Practicum I	<b>FRIDAY</b> ECE Practicum I
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Jefferson College

# ELECTRONICS



**ATS**  
AREA TECHNICAL SCHOOL

# **ELECTRONICS**

## **(JUNIORS & SENIORS)**

### **A.M.**

The Electronics core curriculum consists of lecture and laboratory experience involving: analysis of direct current and alternating current circuits; the study of semiconductor physics; semiconductors as physical devices and circuit elements. Instruction in Mathematics is also a concurrent component of the program and includes selected topics from algebra, trigonometry, and plane geometry with technical applications.

The student must be currently enrolled as a junior or senior in high school. The student must have a basic understanding of the following mathematical concepts: addition, subtraction, multiplication and division. The student should understand and be functional in these concepts as they pertain to whole numbers, fractions and decimals. Coursework that demonstrates abstract reasoning ability and geometric concepts, or assessments such as the ASVAB, would be beneficial.

Electronics Technicians are employed as engineering associates, calibration technicians; medical electronics service technicians, and industrial equipment technicians.

Students enrolled in a Career Education Program are expected to conduct themselves in a professional manner. Students must be able to follow instructions and work as a member of a team to achieve the course objectives. Students are expected to be accurate, have a positive attitude and maintain good attendance throughout the school year.

Instruction will involve both classroom and laboratory experiences with home study required.

#### **Recommended High School Courses:**

Algebra (with grade of C or better)  
General Shop

Applied Mathematics  
Physical Sciences

Basic Electricity  
Geometry

These are not established pre-requisites. Students that have been successful in any of these courses have historically demonstrated a higher degree of success in this career education program.

#### **Estimated Tools/Supply Requirements:**

Scientific Notation Calculator (Recommended: Texas Instruments TI-30 or Casio FX260)



# Electronics

## Schedule of Classes 2011-2012

### YEAR 1 - 1ST SEMESTER

	<b>MONDAY</b>	<b>TUESDAY</b>	<b>WEDNESDAY</b>	<b>THURSDAY</b>	<b>FRIDAY</b>
<b>1st Semester:</b>	DC Circuits	DC Circuits	DC Circuits	DC Circuits	DC Circuits
<b>2nd Semester:</b>	AC Circuits	AC Circuits	AC Circuits	AC Circuits	AC Circuits

### YEAR 1 - 2ND SEMESTER

	<b>MONDAY</b>	<b>TUESDAY</b>	<b>WEDNESDAY</b>	<b>THURSDAY</b>	<b>FRIDAY</b>
<b>1st Semester:</b>	Semiconductors I	Semiconductors I	Semiconductors I	Semiconductors I	Semiconductors I
<b>2nd Semester:</b>	Semiconductors II	Semiconductors II	Semiconductors II	Semiconductors II	Semiconductors II

### ONE YEAR PROGRAM - JUNIOR and SENIORS ONLY



Jefferson   
College

# **FIRE SCIENCE TECHNOLOGY**



**ATS**  
AREA TECHNICAL SCHOOL

# Fire Science Technology

(Seniors only)

A.M.

The Fire Science Technology program introduces students to a career as a full-time or volunteer fire fighter. Students will learn to control and extinguish fires, prevent fires, provide emergency medical services, respond to hazardous materials and disasters, and search and rescue.

Students successfully completing the program will be eligible to take the Fire Fighter I and II State Certification Exams. To take the Fire Fighter I and II and Hazardous Materials exam for state level certification, students must meet all requirements for Fire Fighter I and II and Hazardous Materials certification within one year of the course completion date. Students must turn 18 within one year of the course completion.

Students enrolled in a Career Education Program are expected to conduct themselves in a professional manner. Students must be able to follow instructions and work as a member of a team to achieve the course objectives. Students are expected to be accurate, have a positive attitude and maintain good attendance throughout the school year.

Instruction will involve both classroom and laboratory experiences with home study required.

## Recommended High School Courses:

General Science

Biology and Chemistry

Health

Applied Math through Algebra

These are not established as pre-requisites. Students that have been successful in any of these courses have historically demonstrated a higher degree of success in this career education program.



## Fire Science Technology

Schedule of Classes 2011-2012

*\*\* tentative courses*

### YEAR 1 - 1ST SEMESTER

#### MONDAY

Intro to Fire Service and Fire Prevention

#### TUESDAY

Hazardous Materials Awareness and Ops

#### WEDNESDAY

Intro to Fire Service and Fire Prevention

#### THURSDAY

Hazardous Materials Awareness and Ops

#### FRIDAY

Intro to Fire Service and Fire Prevention

### YEAR 1 - 2ND SEMESTER

#### MONDAY

Fire Fighter I and II

#### TUESDAY

Building Construction

#### WEDNESDAY

Fire Fighter I and II

#### THURSDAY

Building Construction

#### FRIDAY

Fire Fighter I and II

Jefferson College

# HEALTH SERVICES



**ATS**  
AREA TECHNICAL SCHOOL

# **HEALTH SERVICES ASSISTANT**

## **(JUNIORS & SENIORS)**

### **16 YEARS OF AGE OR OLDER**

### **A.M. AND P.M.**

The instruction in Health Services is designed to provide specific educational experiences essential for development of skills, knowledge, and attitudes necessary for employment in existing and emerging health occupations. Each student will develop understanding and skills in basic nursing practice as they apply to the duties of a nurse's aide.

Instruction will include procedures and directions in the following areas: basic hygiene and infection control techniques, bed making, personal care procedures, food service, charting, basic preventative and restorative care, basic observation, safety techniques, basic emergency first aid, uncomplicated nursing procedures, i.e., recording vital signs, weighing and measuring, etc; communication and mathematical skills, interpersonal relationships, teamwork, and ethical and legal responsibilities. Students must be at least 16 years of age to participate in this program and have reliable transportation to and from the clinical sites.

During the course, each student will have the opportunity to meet the requirements and pass exams to become certified in both Cardio-Pulmonary Resuscitation (CPR) and as Nursing Assistants.

1. The basic program consists of a minimum of, a state required 75 hours of classroom instruction and,
2. A required minimum of one-hundred (100) hours on-the-job clinical practice completed by each student under the supervision of an R.N. or L.P.N. approved by the Department of Health and Senior Services. The supervisor shall provide documentation to the instructor(s) that the one-hundred hours have been completed prior to final testing for state certification purposes.
3. The student must pass a minimum of three (3) written or oral tests throughout the course with a score of eighty (80) percent or better on each test to be eligible to take the final exam, according to the Department of Health and Senior Services, Division of Health Standards and Licensure.
4. The final written or oral examination is 75 questions presented by the examiner based on the standardized curriculum and selected from a specific test pool of questions which are safeguarded under the auspices of the Department of Health and Senior Services. The student must score a minimum of 80% to pass the written or oral exam.
5. The student must also successfully complete at least nine (9) procedures under the observation of the instructor or a facility licensed nurse and the state examiner. The nine (9) procedures shall always include a type of bath, vital signs, transfer techniques, feeding techniques, active or passive range of motion, dressing and grooming, skin care, hand washing, and gloving. Other procedures may be determined by resident's needs. All procedures must be evaluated.
6. All students must successfully pass both a criminal background check and an Office of Inspector General background check as required by the appropriate state agencies. This is paid for by Jefferson College.

Regular attendance is vital for success in this program. All requirements as listed must be met for state certification.

**Minimum Requirements:**

Students must have personal, dependable transportation for all clinical site assignments. Students are responsible for transportation and related expenses to and from clinical sites.

The student must have a basic understanding of the following mathematical concepts: addition, subtraction, multiplication and division. The student should understand and be functional in these concepts as they pertain to whole numbers, fractions and decimals.

Students enrolled in a Career Education Program are expected to conduct themselves in a professional manner. Students must be able to follow instructions and work as a member of a team to achieve the course objectives. Students are expected to be accurate, have a positive attitude and maintain good attendance throughout the school year.

Instruction will involve both classroom and laboratory experiences with home study required.

Students are also required to meet minimum restrictions for lifting.

**Recommended High School Courses:**

General Science	Health
Keyboarding	Applied Math through Algebra
Biology and Chemistry (Recommended for Nursing and Allied Health Careers)	

These are not established as pre-requisites. Students that have been successful in any of these courses have historically demonstrated a higher degree of success in this career education program.

**Estimated Instructional Materials Requirement:**

Students enrolled in the Health Services Assistant Program are required by the Division of Health Standards and Licensure to participate in a supervised learning experience in a related health service facility. Since this type of instruction cannot be given on the Jefferson College campus, students enrolled in the program must provide their own transportation when the class meets off campus. Clinical instruction is at a local, long-term health care facility.

In addition, students must purchase the items needed on the provided materials list to participate in the class. Students do not need these items on the first day of classes. The instructor will let students know when to bring in their materials.

# Health Services Expenses Information

## *Student is expected to pay for:*

Item Description	Cost to you
<b>Gait Belt for Clinical</b> <i>(ordered by ATS, make check payable to Jefferson College)</i>	\$7.00
<b>Uniforms</b> Students will be required to purchase 2 uniforms. Uniforms are ordered through a company chosen by the ATS. Students will be fitted at the ATS in September for their uniforms. <i>(Ordered at ATS, cost varies slightly and is paid to uniform company)</i>	\$75.00
<b>Tennis Shoes</b> Shoes must be mostly white. Shoes should provide quality support to the feet during clinical. <i>(Purchased at store of your choosing)</i>	\$ 25.00- \$ 75.00
<b>Black Ink Pens and Notebook Paper</b> <i>(Purchased at store of your choosing)</i>	\$5.00 - \$15.00
<b>Index Cards</b> <i>(Purchased at store of your choosing)</i>	\$1.00-\$5.00
<b>Watch with a second hand</b> <i>(Purchased at store of your choosing)</i>	\$10.00-\$25.00
<b>Plain white socks</b> <i>(Purchased at store of your choosing)</i>	\$5.00-\$15.00
<b>Estimated Total Student Expenses</b>	\$128.00- \$217.00
<b><i>Instructor will advise of due dates for each item.</i></b>	

*\*Students can purchase additional optional supplies at a discount, such as a clinical jacket, stethoscope and a blood pressure cuff. More information will be given the second week of class.*

## *Area Technical School will pay for:*

Item Description	Cost to you
<b>State Manual in Three Ring Binder</b>	\$0.00
<b>CPR Training, Certification, &amp; Book</b>	\$0.00
<b>Liability Insurance</b>	\$0.00
<b>State Certified Nursing Assistant Examination Fee</b>	\$0.00
<b>Association Registration Certification Fee</b>	\$0.00
<b>Criminal Background Check Fee</b>	\$0.00
<b>Two Step Tuberculosis Test</b>	\$0.00
<b>Estimated Total Student Expenses</b>	\$0.00

***Student needs to mail a copy of both the front and back side of their signed social security card to the instructor.***

**Due by the first week of class**

***All Students need to bring a copy of their Hepatitis B Immunizations to the Instructor.***

***You may ask your school nurse for a copy or the place where the student received the Hepatitis B Immunizations.***

**Due by the first week of class**

Proof of Hepatitis B vaccination is required the first week of class.

Each student will undergo an extensive background check to help ensure their safety and the safety of the individuals in which they will be in care of. The Family Care Safety Registry (FCSR), administered by the Missouri Department of Health and Senior Services (DHSS), provides families and other employers with a method to obtain background screening information. The Registry, through various state agencies, offers several resources to screen child care, elder care and personal care workers and child care and elder care providers.

1. State criminal history and sex offender registry records maintained by the Missouri Highway Patrol
2. Child abuse/neglect records, maintained by the Department of Social Services
3. The Employee Disqualification List, maintained by the Department of Health and Senior Services
4. The Employee Disqualification Registry, maintained by the Department of Mental Health
5. Child care facility licensing records, maintained by the Department of Health and Senior Services
6. Foster parent, residential care facility, and child placing agency licensing records, maintained by the Department of Social Services
7. Residential living facility and nursing home licensing records, maintained by the Department of Health and Senior Services
8. Office of Inspector General



## **Health Service Technology**

### **Schedule of Classes 2011-2012**

#### **YEAR 1 - 1ST SEMESTER**

##### **MONDAY**

Health Services  
Assistant I

##### **TUESDAY**

Health Services  
Clinicals I

##### **WEDNESDAY**

Health Services  
Clinicals I

##### **THURSDAY**

Health Services  
Assistant I  
Applied Math I  
Applied Comm I

##### **FRIDAY**

Health Services  
Assistant I  
Applied Math I  
Applied Comm I

#### **YEAR 1 - 2ND SEMESTER**

##### **MONDAY**

Health Services  
Assistant II

##### **TUESDAY**

Health Services  
Clinicals II

##### **WEDNESDAY**

Health Services  
Clinicals II

##### **THURSDAY**

Health Services  
Assistant II  
Applied Math II  
Applied Comm II

##### **FRIDAY**

Health Services  
Assistant II  
Applied Math II  
Applied Comm II

#### **ONE YEAR PROGRAM - JUNIORS and SENIORS ONLY**

Jefferson   
College

# HEATING REFRIGERATION & AIR CONDITIONING



**ATS**  
AREA TECHNICAL SCHOOL

# **HEATING, REFRIGERATION AND AIR CONDITIONING TECHNOLOGY**

## **(SENIORS)**

### **A.M.**

Introduction in Heating, Refrigeration and Air Conditioning involves both lecture and laboratory experiences in basic electricity with topics in electron theory, series and parallel circuits, test equipment, electric motors and an introduction to household wiring. Principles of Refrigeration includes the study of basic refrigeration theory, use of hand tools and test equipment, soldering and brazing, and evaluating and charging systems. The study of domestic refrigerators and freezers involves the application of small low temperature hermetic compressors and compression systems, electrical circuits and controls, automatic defrost circuits and ice makers. Instruction in the installation, diagnosis and service of window air conditioners and dehumidifier systems is also included.

The student must be enrolled as a senior in high school. The student must have a basic understanding of the following mathematical concepts: addition, subtraction, multiplication and division, as they pertain to whole numbers, fractions and decimals.

Students enrolled in a Career Education Program are expected to conduct themselves in a professional manner. Students must be able to follow instructions and work as a member of a team to achieve the course objectives. Students are expected to be accurate, have a positive attitude and maintain good attendance throughout the school year.

Instruction will involve both classroom and laboratory experiences with home study required.

#### **Recommended High School Courses:**

General Shop

Physical Science

Applied Mathematics

Algebra

These classes are not established as pre-requisites. Students that have been successful in any these courses have historically demonstrated a higher degree of success in this career education program.

Estimated Tools/Materials Requirements: TBA

Parents and students will notified as soon as the tool list becomes available.

**Heating, Refrigeration and Air Conditioning Technology**  
Schedule of Classes 2011-2012

**YEAR 1 - 1ST SEMESTER**

**MONDAY**  
Basic Electricity  
Principles of  
Refrigeration

**TUESDAY**  
Basic Electricity  
Principles of  
Refrigeration

**WEDNESDAY**  
Basic Electricity  
Principles of  
Refrigeration

**THURSDAY**  
Basic Electricity  
Principles of  
Refrigeration

**FRIDAY**  
Basic Electricity  
Principles of  
Refrigeration

**YEAR 1 - 2ND SEMESTER**

**MONDAY**  
Refrig Mech Sys  
AC Mech Systems

**TUESDAY**  
Refrig Mech Sys  
AC Mech Systems

**WEDNESDAY**  
Refrig Mech Sys  
AC Mech Systems

**THURSDAY**  
Refrig Mech Sys  
AC Mech Systems

**FRIDAY**  
Refrig Mech Sys  
AC Mech Systems

**ONE YEAR PROGRAM - SENIORS ONLY**



Jefferson   
College

# **METAL FABRICATION**



**ATS**  
AREA TECHNICAL SCHOOL

# **METAL FABRICATION**

## **(SOPHOMORES, JUNIORS, & SENIORS)**

### **A.M. AND P.M.**

Metal Fabrication provides students with specialized learning experiences in metal work. Students are prepared to assume the duties of an all-around metal worker capable of fabricating and assembling a variety of metal products in many industries. The program is comprised of three components: sheet metal, machining and welding. Instruction includes theory, laboratory, and shop work as they relate to materials layout.

Also, students will learn how to sequence operations: set up and operate fabrication machines; position, align, fit and weld parts; and design and construct templates and fixtures. Materials used during fabrication include items which are machined, shaped, cut, bent, pressed, fused, and marked. Metals used in shop include aluminum, stainless and carbon steel.

Students will learn to operate the following industry related machines: vertical mills, engine lathes, stick welders, mig welders, sheet metal brakes, pipe threaders, cutting torches, and plasma cutters, hydraulic shears and press, and tig welders.

Student must be enrolled as a high school sophomore, junior or senior. The student must have a basic understanding of the following mathematical concepts: addition, subtraction, multiplication and division. The student should understand and be functional in these concepts as they pertain to whole numbers, fractions and decimals.

Recommended High School Courses:

Metal Fabrication	General Shop	Keyboarding
General Metals	Applied Math	

These courses are not established as pre-requisites. Students that have been successful in any of these courses have historically demonstrated a higher degree of success in this technical program.

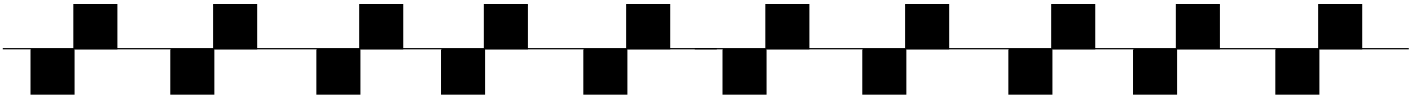
Students enrolled in a Career Education Program are expected to conduct themselves in a professional manner. Students must be able to follow instructions and work as a member of a team to achieve the course objectives. Students are expected to be accurate, have a positive attitude and maintain good attendance throughout the school year.

#### **Tool/Supply Requirements:**

20' Tape Measure	Pen or Pencil	Three Ring Binder
Safety Glasses (2)	Welding Jacket	Flint Type Striker
Welding Helmet	Soapstone	High Speed Cutter Bit
Steel Toe Work Boots	Welding Gloves (Gauntlet type)	

**Total estimated cost: \$110.00**

Tools/supplies are not required to be new, but must be in safe working condition.



**Metal Fabrication**  
Schedule of Classes 2011-2012

**YEAR 1 - 1ST SEMESTER**

<b>MONDAY</b> Metal Fabrication I	<b>TUESDAY</b> Metal Fabrication I	<b>WEDNESDAY</b> Applied Math I Applied Comm I	<b>THURSDAY</b> Metal Fabrication I	<b>FRIDAY</b> Applied Math I Applied Comm I
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**YEAR 1 - 2ND SEMESTER**

<b>MONDAY</b> Metal Fabrication II	<b>TUESDAY</b> Metal Fabrication II	<b>WEDNESDAY</b> Applied Math II Applied Comm II	<b>THURSDAY</b> Metal Fabrication II	<b>FRIDAY</b> Applied Math II Applied Comm II
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**YEAR 2 – 1st SEMESTER**

<b>MONDAY</b> Metal Fabrication III	<b>TUESDAY</b> Metal Fabrication III	<b>WEDNESDAY</b> Metal Fabrication III Applied Comm III	<b>THURSDAY</b> Metal Fabrication III	<b>FRIDAY</b> Metal Fabrication III Applied Comm III
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**YEAR 2 – 2nd SEMESTER**

<b>MONDAY</b> Metal Fabrication IV	<b>TUESDAY</b> Metal Fabrication IV	<b>WEDNESDAY</b> Metal Fabrication IV Applied Comm IV	<b>THURSDAY</b> Metal Fabrication IV	<b>FRIDAY</b> Metal Fabrication IV Applied Comm IV
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**YEAR 3 – 1 st and 2nd SEMESTER**

<b>MONDAY</b> Metal Fabrication V Metal Fabrication VI	<b>TUESDAY</b> Metal Fabrication V Metal Fabrication VI	<b>WEDNESDAY</b> Metal Fabrication V Metal Fabrication VI	<b>THURSDAY</b> Metal Fabrication V Metal Fabrication VI	<b>FRIDAY</b> Metal Fabrication V Metal Fabrication VI
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Jefferson   
College

# **RESIDENTIAL CARPENTRY & Advanced RESIDENTIAL CARPENTRY**



**ATS**  
AREA TECHNICAL SCHOOL

# **RESIDENTIAL CARPENTRY**

## **(SOPHOMORES & JUNIORS)**

### **A.M. AND P.M.**

Residential Carpentry is a pre-apprentice course designed to provide graduates with entry level skills in a variety of construction trades. Instruction will include tool usage and safety, safety on the work site, construction materials, floor framing, wall and ceiling framing, roof framing, roofing materials, windows and doors, exterior finish, insulation, and interior finish. These topics will be covered through lectures, written assignments, demonstrations and skill performance in construction techniques and processes in a laboratory setting. Student must be enrolled as a high school sophomore or junior. The student must have a basic understanding of the following mathematical concepts: addition, subtraction, multiplication and division. The student should understand and be functional in these concepts as they pertain to whole numbers, fractions and decimals.

Students enrolled in a Career Education Program are expected to conduct themselves in a professional manner. Students must be able to follow instructions and work as a member of a team to achieve the course objectives. Students are expected to be accurate, have a positive attitude and maintain good attendance throughout the school year.

Instruction will involve both classroom and laboratory experiences with home study required.

#### ***Recommended High School Courses:***

General Shop  
Vocational Exploration

Woodworking  
Keyboarding

Applied Math  
General Mathematics

These courses are not established as pre-requisites. Students that have been successful in any of these courses have historically demonstrated a higher degree of success in this career education program.

#### **Estimated Tool Requirements:**

Safety Glasses  
25 foot tape measure

**Total Estimated Cost: \$20-25**

# **ADVANCED RESIDENTIAL CARPENTRY**

## **(RETURNING RES. CARP. I STUDENTS)**

### **A.M. AND P.M.**

Instruction consists of application of the topics covered in Residential Carpentry with performance of skills in construction techniques and processes through construction of an actual structure.

Successful completion of the program may lead to union apprenticeship, semi-skilled and laborer type employment within the carpentry and construction industry. The training experience may also be used as preparation for additional technical education.

Students enrolled in a Career Education Program are expected to conduct themselves in a professional manner. Students must be able to follow instructions and work as a member of a team to achieve the course objectives. Students are expected to be accurate, have a positive attitude and maintain good attendance throughout the school year.

Instruction will involve both classroom and laboratory experiences with home study required. Students will build a single family home over the course of the school year.

**Minimum Requirements:** Completion of Residential Carpentry with the Grade of a "C" or better.

**Recommended High School Courses:** Same as Residential Carpentry

#### **Estimated Tool Requirements:**

Carpenters' tool box and lock	Leather tool pouch
White carpenters' bib overalls or painters' pants	Hard hat
Safety glasses and case (not goggles)	Framing hammer, straight claw
25-30 ft. measuring tape	Combination square
Tri square with 1-1/2" wide blade	2 or 3 ft. sands magnesium level (optional)
Chalk line and chalk	Cat's paw bar
Utility knife and blades	String line
Scratch Awl	Speed square (optional)
3/4" wood chisel	1/32" and 3/32" nail sets
Phillips screwdriver	Flat (standard) screwdriver

**Total Estimated Cost: \$250.00**

Please Note: Suitable work attire appropriate to the occupation will be required, Suitable work boots must be worn. Soft shoes such as tennis shoes will not be allowed.

If there are any questions on type or quality of tools, see the instructor prior to purchase to be sure to get the correct tools. If students already have some of the tools needed, it is not necessary to purchase new ones.

It has been our experience that carpenters' overalls and carpenters' tool boxes are usually in short supply. These two items should be purchased as soon as possible to avoid the likelihood of not being able to obtain them.



## Residential Carpentry Schedule of Classes 2011-2012

### YEAR 1 - 1ST SEMESTER

**MONDAY**

Residential Carpentry I

**TUESDAY**Applied Math I  
Applied Comm I**WEDNESDAY**

Residential Carpentry I

**THURSDAY**Applied Math I  
Applied Comm I**FRIDAY**

Residential Carpentry I

### YEAR 1 - 2ND SEMESTER

**MONDAY**

Residential Carpentry II

**TUESDAY**Applied Math II  
Applied Comm II**WEDNESDAY**

Residential Carpentry II

**THURSDAY**Applied Math II  
Applied Comm II**FRIDAY**

Residential Carpentry II

### YEAR 2 – 1st SEMESTER

**MONDAY**

Adv. Resident. Carpentry I

**TUESDAY**

Adv. Resident. Carpentry I

**WEDNESDAY**

Adv. Resident. Carpentry I

**THURSDAY**

Adv. Resident. Carpentry I

**FRIDAY**

Adv. Resident. Carpentry I

### YEAR 2 – 2nd SEMESTER

**MONDAY**

Adv. Resident. Carpentry II

**TUESDAY**

Adv. Resident. Carpentry II

**WEDNESDAY**

Adv. Resident. Carpentry II

**THURSDAY**

Adv. Resident. Carpentry II

**FRIDAY**

Adv. Resident. Carpentry II

### YEAR 3 – 1st SEMESTER

**MONDAY**

Adv. Resident. Carpentry III

**TUESDAY**

Adv. Resident. Carpentry III

**WEDNESDAY**

Adv. Resident. Carpentry III

**THURSDAY**

Adv. Resident. Carpentry III

**FRIDAY**

Adv. Resident. Carpentry III

### YEAR 3 – 2nd SEMESTER

**MONDAY**

Adv. Resident. Carpentry IV

**TUESDAY**

Adv. Resident. Carpentry IV

**WEDNESDAY**

Adv. Resident. Carpentry IV

**THURSDAY**

Adv. Resident. Carpentry IV

**FRIDAY**

Adv. Resident. Carpentry IV



Jefferson College

# RESIDENTIAL WIRING



**ATS**  
AREA TECHNICAL SCHOOL

# RESIDENTIAL WIRING

## (JUNIORS & SENIORS)

### P.M.

Residential Wiring is a lecture/laboratory class that provides a background of electrical principles and practices, and an understanding of National Electrical Code (NEC) requirements. It includes the study of safety requirements, blueprint reading, service entrances, rough-in, trim-out, low voltage and an introduction to home automation.

Students must be enrolled as a junior or senior in high school. The student must have a basic understanding of the following mathematical concepts: addition, subtraction, multiplication and division, as they pertain to whole numbers, fractions and decimals.

Students enrolled in a Career Education Program are expected to conduct themselves in a professional manner. Students must be able to follow instructions and work as a member of a team to achieve the course objectives. Students are expected to be accurate, have a positive attitude and maintain good attendance throughout the school year.

Instruction will involve both classroom and laboratory experiences with home study required. Students will also complete lab exercises on a single family home, where students complete the entire electrical installation.

#### Recommended High School Courses:

Algebra  
Electricity

Applied Mathematics  
Physical Science

General Shop  
Geometry

These are not established pre-requisites. Students that have been successful in any of these courses have historically demonstrated a higher degree of success in this career education program.

#### Tools/Supply Requirements:

Safety Glasses

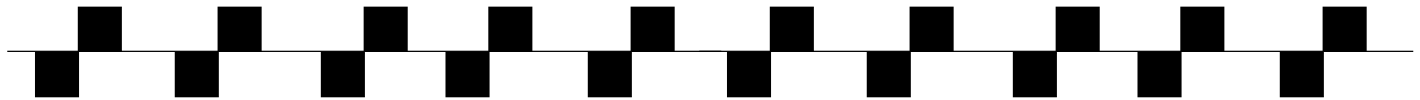
Scientific notation calculator (Recommended: Texas Instruments TI-30 or Casio FX 260)



**Course objectives include the following:**

- a. Interpret blueprint drawings and perform load calculations pertaining to residential houses
- b. Design, size and install a residential service in compliance with the National Electrical Code
- c. Install receptacle, switch and lighting outlets for a residential dwelling in compliance with the National Electrical Code
- d. Perform trim out for a residential wiring system and troubleshoot electrical problems for new and existing dwellings
- e. Install low voltage wiring systems in compliance with TIA/EIA standards and the National Electrical Code
- f. Explain Home Automation and do basic associated wiring and programming.

*(If taken as a Junior students may take Electronics during their Senior Year)*



**Residential Wiring**  
**Schedule of Classes 2011-2012**

**YEAR 1 - 1ST SEMESTER**

**MONDAY**  
Basic Electricity

**TUESDAY**  
Industrial Math

**WEDNESDAY**  
Basic Electricity

**THURSDAY**  
Industrial Math

**FRIDAY**  
Basic Electricity

**YEAR 1 - 2ND SEMESTER**

**MONDAY**  
Residential Wiring  
Intro National Elec Code

**TUESDAY**  
Residential Wiring  
Residential Wiring Practicum

**WEDNESDAY**  
Residential Wiring  
Intro National Elec Code

**THURSDAY**  
Residential Wiring  
Residential Wiring Practicum

**FRIDAY**  
Residential Wiring  
Intro National Elec Code

**ONE YEAR PROGRAM - JUNIORS and SENIORS ONLY**

JEFFCO #6

Jefferson College

# WELDING TECHNOLOGY



**ATS**  
AREA TECHNICAL SCHOOL

# WELDING TECHNOLOGY

## (JUNIORS & SENIORS)

### A.M. AND P.M.

The instruction in Welding Technology will progress from basic gas and arc welding through advanced arc, gas metal arc (MIG), gas tungsten (TIG) and advanced welding techniques. Instruction in Industrial Math, Industrial Blueprint Reading, an Introduction to Metallurgy and Dimensional Metrology (precision measuring equipment) are also included.

The student must be enrolled as a junior or senior in high school. The student must have a basic understanding of the following mathematical concepts: addition, subtraction, multiplication and division, as they pertain to whole numbers, fractions and decimals.

Students enrolled in a Career Education Program are expected to conduct themselves in a professional manner. Students must be able to follow instructions and work as a member of a team to achieve the course objectives. Students are expected to be accurate, have a positive attitude and maintain good attendance throughout the school year.

Instruction will involve both classroom and laboratory experiences with home study required.

#### Minimum Requirements:

Applied Math                                      General Shop                                      General Metals

These classes are not established as pre-requisites. Students that have been successful in any of these courses have historically demonstrated a higher degree of success in this career education program.

#### Estimated Tools/Supplies Requirements:

Safety glasses clear	\$3.00
Safety glasses	6.50
#1 Victor welding tip 1-W-1	32.00
Tip cleaner	2.00
Chipping hammer	8.50
Wire brush	1.00
Cutting goggles with #5 lens	8.00
Welding hood with #10 lens	23.00
Soap stone	.50
Combination Square	15.00
Vise grip	18.00
Flint type striker	1.50
Scientific Calculator (For Mathematics)	15.00
Protractor	3.00
Welding gloves (heavy)	4.50
Welding gloves (Tig) Tillman 24CL	8.50
Welding jacket (green)	13.00
Leather Sleeves w/cape	21.00
Boots or shoe protectors	50.00
12' tape measure	15.00

**Total Estimated Cost: \$251.00**

Prices are approximate and may vary depending on source. Jefferson College does not recommend any particular supplier over another. However, all tools should be of professional quality.



## **Welding Technology** **Schedule of Classes 2011-2012**

### **YEAR 1 - 1ST SEMESTER**

**MONDAY**

Gas/Beginning Arch Weld

**TUESDAY**

Gas/Beginning Arch Weld

**WEDNESDAY**

Gas/Beginning Arch Weld

**THURSDAY**

Gas/Beginning Arch Weld

**FRIDAY**

Math for Welders

### **YEAR 1 - 2ND SEMESTER**

**MONDAY**

Adv Arc Welding

**TUESDAY**

Adv Arc Welding

**WEDNESDAY**

Adv Arc Welding

**THURSDAY**

Adv Arc Welding

**FRIDAY**

Math for Welders

### **YEAR 2 – 1st SEMESTER**

**MONDAY**

Gas/Beginning Arch Weld (MIG)

**TUESDAY**

Gas/Beginning Arch Weld (MIG)

**WEDNESDAY**

Gas/Beginning Arch Weld (MIG)

**THURSDAY**

Gas/Beginning Arch Weld (MIG)

**FRIDAY**

Math for Welders

### **YEAR 2 – 2nd SEMESTER**

**MONDAY**

TIG Welding

**TUESDAY**

TIG Welding

**WEDNESDAY**

TIG Welding

**THURSDAY**

TIG Welding

**FRIDAY**Industrial Blue Print  
Reading