

# **Career Technical Education**

995 N. Reed Avenue Reedley, CA 93654 • 559-638-0300

Reedley College is a college of the State Center Community College District

www.reedleycollege.edu

# Career Technical Education Programs





# Welcome



Welcome to Reedley College and our Career Technical Education (CTE) Program.

The CTE Programs at Reedley College offer a wide variety of options for Fresno, Madera, and Tulare county residents. Local businesses serve as advisors which allow us to keep in touch with the needs of industry and tailor our programs to prepare students for employment. Students may choose to enter employment at the end of their training or continue their education at a bachelor-degree granting college or university.

CTE Programs offer students the option of a fast path to employment or an associate degree. Fast path programs can range from ten weeks to four semesters in length and do not require general education classes. Some programs do require prerequisite math and/or reading classes, however. Students may choose to pursue an associate of science degree in their chosen CTE Program. The associate of science degree completion time is typically two years.

Reedley College takes pride in providing CTE Programs that are innovative, state-of-the-art, and have knowledgeable, caring instructors. Thousands of dollars are invested annually to replace equipment with the newest devices. Highly qualified instructors attend conferences and workshops to learn about current best practices and pass this knowledge on to students. Every effort is made to ensure students receive the highest quality training available.

Reedley College is proud to educate students through our CTE Programs. It is our hope that the training they receive will make them competitive in the marketplace and will help to successfully meet the workforce needs of our region.

Dr. Sandra Caldwell President, Reedley College



Reedley College 995 North Reed Avenue Reedley, California 93654 (559) 638-0300 www.reedleycollege.edu

Reedley College motivates and empowers students to be successful by providing high-quality, innovative educational opportunities. We inspire a passion for learning to meet the academic and workforce goals of our diverse communities. Our associate degree programs, career technical education, transfer level, and basic skills courses are offered in an accessible and safe learning environment.

#### **About Reedley College**

Reedley College is located in Reedley, California, 30 miles southeast of Fresno. In a rural setting, the campus community enjoys a unique combination of urban sophistication and rural values. Reedley College provides day, evening, and weekend classes. Operated on an 18-week semester system, the college offers a fall and spring term, as well as four-, six-, eight-, and ten-week summer sessions.

Reedley College and its centers and sites are part of the State Center Community College District (SCCCD), which covers an area of nearly 6,000 square miles in the heart of the San Joaquin Valley. SCCCD includes Reedley College, Fresno City College, Clovis Community College, Madera Community College Center, Oakhurst Community College Center, Career and Technology Center and the Training Institute.

Reedley College complies with all Federal and State rules and regulations and does not discriminate on the basis of race, color, national origin, gender, disability, sexual orientation, religion or age. This holds true for all students who are interested in participating in educational programs and/or extracurricular school activities. Harassment of any employee/student with regard to race, color, national origin, gender, disability, sexual orientation, religion or age is strictly prohibited. Limited English speaking skills will not be a barrier at Reedley College to participation in Vocational Education programs. Inquiries regarding compliance and/or grievance procedures may be directed to the college's Title IX Officer and/or the Section 504/ADA Coordinator.

Reedley College Interim Title IX Officer/Section 504/ADA Coordinator Lisa McAndrews 995 North Reed Ave. Reedley, CA, 93654 559-638-0300 ext. 3258



# **Agriculture & Natural Resources Department**

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# Agriculture & Natural Resources Department

#### **Department Chair**

Nick Deftereos nick.deftereos@reedleycollege.edu 559 638-0300 Ext. 3736

#### **Dean of Instruction**

David Clark david.clark@reedleycollege.edu (559) 638-0300 Ext. 3361

### **Industry Overview:**

Agriculture has long been a mainstay of the nation's economy. Modern agriculture is a diverse industry with a wide variety of employment opportunities. Careers in the plant and animal sciences are on the rise, as are careers in the exporting business. Our own Central Valley is ripe with opportunities in the agriculture industry, from farm management to agriculture business to farm equipment mechanics.

# **Reedley College Facilities**

Pursue a career in agriculture at one of the finest community college agriculture programs. Educational facilities include a 300-acre school farm, 800-acre school forest at Sequoia Lake, computer lab, commercial sheep and beef herds, indoor/outdoor arena, livestock pavilion, student horse-boarding facility, greenhouses, field growing area, vineyard, and community garden.

#### **Career Profiles**

The career profiles in this section offer an in-depth look at some of the many career opportunities in this industry. Getting your start in one of the vocational programs at Reedley College is the first step toward choosing a career in this industry. For more information, speak to a career counselor about the multitude of career options available.



# **Agriculture Education Program**

**Purpose:** The agricultural education program is designed to equip students for careers as agricultural communication specialists or secondary agriculture teachers. In addition to a required selection of core courses, students will choose a specialization in one of the following focus areas: Agricultural Business, Animal Sciences, Plant Sciences, Mechanized Agriculture, or Natural Resources.

#### **Faculty Advisor**

Kevin Woodard kevin.woodard@reedleycollege.edu (559) 638-0300 Ext. 3719

#### **Faculty Advisor**

Sam Rodriguez samuel.rodriguez@reedleycollege.edu (559) 638-0300 Ext. 3481

### **Major Courses:**

Agriculture Education Orientation
Agriculture and Natural Resources Ambassadors
Agricultural Economics
Agriculture Accounting
Introduction to Animal Science
Principles of Environmental Horticulture

Introduction to Forestry
Soils
Soils Laboratory
Introduction to Agricultural Mechanics
and 6 additional specialization units

# **Career Corner**

### **Career Opportunities:**

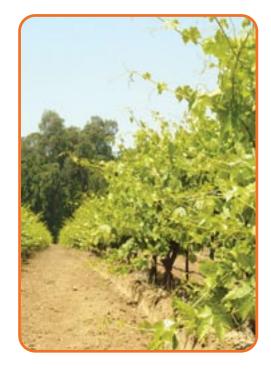
Junior High School Agriculture Teacher High School Agriculture Teacher Community College Agriculture Instructor Agriculture Communication Specialist

#### **Career Profile:**

High School Agriculture Teacher

**Overview:** Agriculture teachers lead a life of purpose experiencing new meaningful adventures every day of their career. Through the successful integration of classroom and laboratory instruction, leadership development, and experiential learning you will never have the same day twice as an ag teacher. Enjoy the daily variety that accompanies teaching career technical skills, science, math, communications, leadership, management, and technology.

Future Outlook: Job prospects are strong.



Salary Oppo	ortunities:	LOW	MEDIUM	HIGH
	U.S.	\$38,680	\$56,130	\$90,040
	Fresno	\$40,000	\$72,635	\$95,280

# **Agriculture Business Program**

# Associate Degree/Certificate of Achievement -

**Purpose:** Agriculture is much more than farming and ranching. Less than five percent of college graduates are working on a farm or ranch 10 years later. Most are working as professionals in agriculture business, industry, or education. There are more than 59,000 professional jobs in agriculture available every year. Job opportunities are expected to continue to exceed the supply of trained individuals well into the 21st Century.

# **Major Courses:**

Ag Sales & Communications

Ag Accounting

Ag Economics

Career Leadership Seminar

Career Preparation

Computer Applications in Ag Construction Technology Farm Management

General Livestock Production

Intro Plant Science

Machinery Technology

Occupational Cooperative Work Experience

Soils

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Kevin Woodard kevin.woodard@reedleycollege.edu (559) 638-0300 Ext. 3719

#### **Faculty Advisor**

Sam Rodriguez samuel.rodriguez@reedleycollege.edu (559) 638-0300 Ext. 3481

# **Career Corner**

### **Career Opportunities:**

Ag Sales Representative Agricultural Manager Agriculture Business Manager Agriculture Salesman/Dealer Bank Loan Officer Farm or Ranch Manager Management Consultant

#### **Career Profile:**

Agricultural Manager

**Overview:** Agricultural managers manage the day-to-day activities of one or more farms, ranches, nurseries, timber tracts, greenhouses, or other agricultural establishments for farmers, absentee landowners, or corporations. Their duties and responsibilities vary widely, but are concentrated on the business aspects of running a farm. On small farms, they may oversee the entire operation, while on large farms they may oversee a single activity, such as marketing. Agricultural managers may:

- · establish output goals
- · determine financial constraints
- monitor production and marketing
- hire, assign, and supervise workers
- determine crop transportation and storage requirement
- oversee maintenance of property and equipment

Future Outlook: Job prospects are strong.

Growing consumer demand for horticulture products (flowers, trees, and other non-edibles) is expected to produce better employment opportunities for green house and nursery farmers and managers. Also, agriculture should continue to provide new employment opportunities over the next ten years.

Salary Oppo	ortunities:	LOW	MEDIUM	HIGH
	U.S.	\$34,800	\$61,700	\$80,600
	Fresno	\$46,900	\$72,100	\$84,700



# **Agriculture Mechanics Program**

# Associate Degree/Certificate of Achievement-

**Purpose:** Agricultural Mechanics improve agricultural technology by working as engineers, sales representatives, or service technicians and mechanics. The degree/certificate provides practical hands-on instruction in the areas of basic agricultural mechanics, welding/fabrication, small engine repair and maintenance, and electrical and hydraulics. This program includes lecture based classes and practical hands-on laboratory activities. This certificate will benefit those students who wish to become high school agriculture mechanics instructors or work in the agricultural mechanics field.

### **Major Courses:**

Introduction to Agricultural Mechanics Introduction to Agricultural Welding Small Gasoline and Diesel Engines Electrical and Hydraulic Fundamentals Agriculture Welding Fabrication Machinery Technology

#### **Faculty Advisor**

Nick Deftereos nick.deftereos@reedleycollege.edu (559) 638-0300 Ext. 3736

#### **Faculty Advisor**

Larry Dinis larry.dinis@reedleycollege.edu (559) 638-0300 Ext. 3151

#### **Faculty Advisor**

Gary Wenter gary.wenter@reedleycollege.edu (559) 638-0300 Ext. 3317

# **Career Corner**

# **Career Opportunities:**

Agricultural Engineer Ag Machinery Salesperson Ag Mechanics Technician

#### **Career Profile:**

Agricultural Engineer

**Overview:** Agricultural engineers design and construct ag equipment and structures, ranging from tillers to storage facilities. Using engineering principles, these professionals assess technological needs in terms of farming requirements in order to create efficient machinery. For example, engineers may test varying power sources to find the most economical fuel for tractors or evaluate water conservation methods to design cost-effective sprinkler systems. Engineers may also be responsible for writing ag machinery quidelines or manuals.

#### **Future Outlook:**

Employment of agricultural engineers is projected to grow from 2014 to 2024. The need to increase the efficiency of agricultural production systems and to reduce environmental damage should maintain demand for these workers.



Salary Opp	ortunities:	LOW	MEDIUM	HIGH
	U.S.	\$47,490	\$75,090	\$116,830
	Fresno	\$37,280	\$65,800	\$113,560

# **Animal Science Program**

### Associate Degree/Certificate of Achievement-

**Purpose:** This program is designed to provide practical study and training in areas of livestock science. The program deals with the application of various management and production factors preparing students for work opportunities in animal nutrition, reproduction, health, marketing, meats, and other areas associated with the livestock industry. Co-curricular activities include: Aggie Club, Ag Ambassadors, Landscape Club, Livestock Show Team, and Forestry Club.

#### **Faculty Advisor**

David Lopes david.lopes@reedleycollege.edu (559) 638-0300 Ext. 3319

#### **Faculty Advisor**

Desiree Molyneux desiree.molyneux@reedleycollege.edu (559) 638-0300 Ext. 3283

#### **Major Courses:**

Ag Accounting
Ag Sales & Communications
Animal Nutrition
Beef Production
Career Leadership Seminar
Career Preparation

Computer Applications in Ag
Construction Technology
Farm Management
General Livestock Production
Intro to Plant Science

Livestock Selection & Evaluation

Machinery Technology
Occupational Cooperative Work Experience
Sheep Production
Soils
Swine Production

# **Career Corner**

# **Career Opportunities:**

Animal Control Specialist

Animal Scientist Feedlot Manager

Geneticist

Livestock Marketing

Nutritionist Veterinarian

Veterinary Technician

Livestock Herdsman

#### **Career Profile:**

Veterinary Technician

**Overview:** Veterinary technicians perform medical tests in a laboratory environment for use in the treatment and diagnosis of diseases in livestock. Technicians assist veterinarians, biological workers, and other scientists by performing more routine tasks, freeing them for specialized, complex tasks. Some of these tasks may be:

- · prepare vaccines and serums for prevention of diseases
- prepare tissue samples, take blood samples, and execute laboratory tests
- clean and sterilize instruments and materials
- maintain equipment and machines

Veterinary technicians also work in companies that produce drugs and feeds, animal production facilities, zoos, meat packing companies, animal shelters, animal control facilities, and spaying and neutering clinics.

#### Future Outlook: Job prospects are strong.

A 36 percent increase in employment growth is expected. The widespread popularity of pets should spur job growth. In addition, as public health organizations, research institutions, pharmaceutical manufacturers, and universities expand their research activities, more openings will be available.

Salary Oppo	ortunities:	LOW	MEDIUM	HIGH
	U.S.	\$17,000	\$24,200	\$34,900
	Fresno	\$17,500	\$22,400	\$28,800



# **Enology Program**

**Purpose:** The curriculum prepares students for CSU transfer into enology programs and entry level positions in the wine industry including prodution quality assurance and control, vineyard management, and grape production.

**Faculty Advisor** 

Timothy Smith, PhD tim.smith@reedleycollege.edu (559) 638-0300 Ext. 3282

### **Major Courses:**

Introductory General Chemistry

Introductory Organic and Biological Chemistry

Microbiology

General Viticulture

Tree and Vine Management

Wine Sensory Analysis and Evaluation

Introduction to Enology Fermentation Science

Winery Laboratory Techniques and Equipment Operation

Soils

Integrated Pest management

# **Career Corner**

### **Career Opportunities:**

Wine Maker Vinyard Management
Wine Technician Winery Management
Technical Winery Management

Tasting Room Assistant Winery Field Representative

#### **Career Profile:**

Wine Maker

**Overview:** Winemakers oversee the entire winemaking process, from grape harvesting through bottling, and may be responsible for supervising the work of grape growers and laboratory technicians. They must possess a knowledge of grapes, growing regions, and local production and marketing regulations. Employers may prefer winemakers with a bachelor's degree in viticulture. A winemaker, also known as an enologist or vintner, oversees the entire production process of creating wine, including grape harvesting, crushing, fermentation, aging, blending, and bottling. They combine scientific concepts with practical experience to alter a wine's chemical composition and make key decisions based on the levels of acid, sugar, sulfur, and sulfite within a wine

Winemakers also supervise the work of viticulturists, the grape growers who work for a winery or an independently owned vineyard. In the case of smaller wineries, a winemaker's responsibilities could begin with grape planting and extend through to the marketing and selling of the final product. Generally, a winemaker's duties begin with pinpointing the right time to harvest, based on the grapes' relative levels of moisture, sweetness, and acidity. The job could require managing the harvesting and transportation processes.

After harvest, they supervise the crushing process that turns grapes into a mixture known as must. The winemaker adds the yeast, sulfites and sugar to the must before heating to trigger fermentation. The process involves the use of machinery, such as vats and pumps, to separate and ferment the wine before it's transferred into wood or steel barrels for aging. Additional duties might include general maintenance of the pumps, barrels, and temperature control equipment. At various stages of the process, the winemaker oversees the work of laboratory technicians who sample and analyze the wine to gauge its chemical composition. Based on these tests, a winemaker decides when to bottle the finished product.

There are no strict educational requirements for careers in wine production. A developed sense of smell and taste, as well as knowledge of grape varietals and growing regions, are essential. Aspiring winemakers can learn the various facets of the process on the job by starting as a cellar assistant. Completion of a bachelor's degree program in viticulture, enology, or in some cases, food science can provide an educational foundation necessary for work in a winery. Professional winemakers must be familiar with all production and marketing regulations in regions where their product is made and sold. The U.S. Alcohol and Tobacco Tax and Trade Bureau sets these regulations, including how labels must disclose a wine's alcohol and sulfite content, blends of grape varietals, and regional origin. Additional regulations vary by state or international territory.

**Future Outlook:** According to the U.S. Bureau of Labor Statistics (BLS), enologists are a part of the food scientist and technologist field. In 2014, the BLS predicted 5% employment growth for these professionals through 2024. PayScale.com reported that winemakers earned a median salary of \$56,512 as of 2015.

Salary Oppo	ortunities:	LOW	MEDIUM	нідн
	U.S.	\$46,000	\$56,512	\$123,000
	Fresno	\$36,940	\$75,320	\$90,320



**Source:** Bureau of Labor Statistics, Occupational Employment Statistics Survey; the Labor Market Information Office within the State Employment Security Agency.

# **Environmental Horticulture Program**

### Associate Degree/Certificate of Achievement -

**Purpose:** Upon completion of the Environmental Horticulture Associate in Science Degree, students will have developed skills and competencies in landscape design and maintenance, plant propagation and production, floral design, pest management, irrigation installation, and water management. The skills and knowledge developed by students through this course of study will successfully prepare them to assume responsibility for leadership and management positions in horticultural business organizations and/or governmental agencies such as landscape contracting, landscape and grounds maintenance, landscape design, retail and wholesale nursery operations, pest control, floral design, and other environmental horticulture industry sectors.

#### **Faculty Advisor**

David Lopes david.lopes@reedleycollege.edu (559) 638-0300 Ext. 3319

#### **Faculty Advisor**

Desiree Molyneux desiree.molyneux@reedleycollege.edu (559) 638-0300 Ext. 3283

# **Major Courses:**

Agriculture Accounting
Computer Applications in Agriculture
Ag Sales and Communications
Introduction to Agricultural Mechanics
Agriculture Accounting

Computer Applications in Agriculture
Ag Sales and Communications
Introduction to Agricultural Mechanics
Integrated Pest Management
Principles of Environmental Horticulture

Beginning Floral Design Plant Propagation/Production Landscape Design

# **Career Corner**

# **Career Opportunities:**

Groundskeeper
Landscape Architects
Landscape Contractor
Nursery and Greenhouse Managers
Turf Managers

#### **Career Profile:**

Landscape Architect

**Overview:** Landscape architects design attractive and functional public parks, gardens, playgrounds, residential areas, college campuses, and public spaces. They also plan the locations of buildings, roads, walkways, flowers, shrubs, and trees within these environments. Landscape architects design these areas so that they are not only easy to use but also harmonious with the natural environment.

Landscape architects use several different technologies in their work. For example, using computer-aided design and drafting (CADD) software, landscape architects prepare models of their proposed work. They present these models to clients for feedback and then prepare the final look of the project. Many landscape architects also use geographic information systems (GIS) which offer GPS coordinates of different geographical features. This helps landscape architects design different environments by giving them clues on where to start planning and how to anticipate future effects of the landscape, such as rainfall running into a valley.

#### Future Outlook: Job prospects are strong.

Employment of landscape architects is projected to grow 5 percent from 2014 to 2024, about as fast as the average for all occupations. Planning and developing new commercial, industrial, and residential construction projects and redeveloping existing landscapes will drive employment growth. Competition for jobs in the largest and most prestigious landscape architecture firms is expected to be strong.

Salary Oppo	ortunities:	LOW	MEDIUM	HIGH
	U.S.	\$40,230	\$63,810	\$104,710
	Fresno	\$38,787	\$61,566	\$101,400



**Source:** Bureau of Labor Statistics, Occupational Employment Statistics Survey; the Labor Market Information Office within the State Employment Security Agency.

# **Equine Program**

# Associate Degree/Certificate of Achievement -

**Purpose:** This program emphasizes development of the basic skills required for students seeking entry-level employment in the equine industry. Emphasis will be placed on animal behavior & handling, safety, feeding, breeding, environmental management, marketing, health maintenance, and common veterinary procedures. Students who complete this program may gain employment as an assistant trainer, show groom, breeding assistant, equine supervisor, or barn manager. Courses may also be applied toward other certificate of achievement and/or associate of science degree programs in animal science.

### **Faculty Advisor**

Desiree Molyneux desiree.molyneux@reedleycollege.edu (559) 638-0300 Ext. 3283

# **Major Courses:**

Equine Science
Equine Reproduction
Equitation, Basic Equine Handling
Western Riding & Horsemanship
Introduction to Horse Training

Introductory Farrier Science Animal Packing

# **Career Corner**

# **Career Opportunities:**

Apprentice-Level Farrier Commercial/Government Animal Packer

Assistant Trainer Equine Supervisor
Barn Manager Show Groomer

#### **Career Profile:**

Assistant Horse Trainer

**Overview:** As an assistant horse trainer, you have the opportunity to help in the development of the horse and rider. Assistant horse trainers can apprentice with a horse trainer and in time become trainers themselves. Duties can consist of:

- Teaching horses to lead, pick up their feet and load in a horse trailer
- · Grooming, saddling, and warm up riding for the trainer
- Cleaning and general maintenance of equine facilities

There is much demand for animal scientists specifically trained in the equine area. The equine species are a combination of livestock, companion animals, and sport that requires specific classes and certification to show the specialized skill.

#### Future Outlook: Job prospects are strong

The Equine Program will prepare students for employment in the Animal Science industry specific to Equine. The courses of study will give the students foundational knowledge in equine production, breeding, farrier work, stable management, equine nutrition, health, training, and riding skills.



Salary Opp	ortunities:	LOW	MEDIUM	HIGH
	U.S.	\$38,459	\$53,269	\$77,500
	Fresno	\$26,000	\$41,954	\$62,774

# **Equipment Technician Program**

### Associate Degree/Certificate of Achievement -

**Purpose:** The heavy equipment industry is a large and rapidly changing enterprise in California and around the world. Recent innovations in diesel technology and machine systems demand well-trained, entry-level technicians. In addition to diesel engines, equipment technicians require skills in power trains, computers, electronics, and mobile hydraulics. These skills are needed for employment in the construction, agriculture, forestry, mining, trucking, marine, and industrial engine segments of this ever-expanding industry. The program is proudly sponsored by Quinn Company, a local Caterpillar dealership.

### **Major Courses:**

Equipment Technician 20 Equipment Technician 21 Equipment Technician 30 Equipment Technician 31

Occupational Cooperative Work Experience

# **Faculty Advisor**

Juan Rodriguez juan.rodriguez@reedleycollege.edu. (559) 638-0300 Ext. 3428

#### **Faculty Advisor**

Nick Deftereos nick.deftereos@reedleycollege.edu (559) 638-0300 Ext. 3736

#### **Faculty Advisor**

Larry Dinis larry.dinis@reedleycollege.edu (559) 638-0300 Ext. 3151

#### **Faculty Advisor**

Gary Wenter gary.wenter@reedleycollege.edu (559) 638-0300 Ext. 3317

# **Career Corner**

# **Career Opportunities:**

Construction Equipment Technician Diesel Truck Technician Equipment Sales Farm Equipment Technician

Parts Sales

#### **Career Profile:**

**Equipment Technician** 

**Overview:** Heavy vehicles and mobile equipment are indispensable to many industrial activities, from construction to railroad transportation. Heavy vehicle and mobile equipment service technicians and mechanics repair and maintain engines and hydraulic, transmission, and electrical systems for this equipment. Farm machinery, cranes, bulldozers, and railcars are all examples of heavy vehicles that require such service.

Service technicians perform routine maintenance checks on agricultural, industrial, construction, and rail equipment. They service fuel, brake, and transmission systems to ensure peak performance, safety, and longevity of the equipment.

With many types of modern equipment, technicians can use diagnostic computers to diagnose components needing adjustment or repair. If necessary, they may partially dismantle affected components to examine parts for damage or excessive wear. Then, using hand-held tools, they repair, replace, clean, and lubricate parts as necessary. In some cases, technicians re-calibrate systems by typing codes into the onboard computer. After reassembling the component and testing it for safety, they put it back into the equipment and return the equipment to the field.

**Future Outlook:** The number of heavy vehicle and mobile equipment service technicians and mechanics is expected to grow about as fast as the average for all occupations. Those who have completed postsecondary training programs should find excellent opportunities, as employers report difficulty finding candidates with this training to fill available positions.

Salary Opportunities:		LOW	MEDIUM	HIGH
	U.S.	\$28,300	\$34,800	\$63,600
	Fresno	\$27,100	\$32,500	\$59,900



**Source:** Bureau of Labor Statistics, Occupational Employment Statistics Survey; the Labor Market Information Office within the State Employment Security Agency.

# **Food Safety Program**

### Certificate of Achievement -

**Purpose:** This program will result in the development of the basic skills and competencies required for students seeking entry-level employment in the food animal industry. Upon completion of this program of study, students will achieve certification in Hazard Analysis and Critical Control Points (HACCP) and be able to perform food industry audits.

#### **Faculty Advisor**

Tim Smith tim.smith@reedleycollege.edu (559) 638-0300 Ext. 3282

### **Major Courses:**

Introduction to Animal Science
Meat Evaluation and Processing
Prerequisite Programs for Food Safety
Introduction to Hazard Analysis and Critical Control Points
Verification and Validation of HACCP Systems
Internal Auditing of Food Safety Management

# **Career Corner**

### **Career Opportunities:**

Food Safety Managers Food Safety Technicians Food Scientists

#### **Career Profile:**

Food Scientist

**Overview:** Food scientists and technologists use chemistry, biology, and other sciences to study the basic elements of food. They analyze the nutritional content of food, discover new food sources, and research ways to make processed foods safe and healthy. Food technologists generally work in product development, applying findings from food science research to develop new or better ways of selecting, preserving, processing, packaging, and distributing food. Some food scientists use nanotechnology—problem-solving techniques that work on an atomic scale—to develop sensors that can detect contaminants in food. Other food scientists enforce government regulations, inspecting food-processing areas to ensure that they are sanitary and meet waste management standards.

**Future Outlook:** Employment of agricultural and food scientists is projected to grow 5 percent from 2014 to 2024, about as fast as the average for all occupations. Employment of agricultural and food scientists is projected to grow as research into agricultural production methods and techniques continues.



Salary Oppo	ortunities:	LOW	MEDIUM	HIGH
	U.S.	\$36,500	\$62,470	\$113,520
	Fresno	\$32,800	\$60,210	\$103,725

# Forestry / Natural Resources Program

### Associate Degree/Certificate of Achievement -

**Purpose:** This program provides students with the knowledge, training, and hands-on experience to pursue a career in forestry and natural resources related to wildlife, timber, or recreation. Following completion of this program, students will be able to enter the workforce with specialized forest technician training.

### **Major Courses:**

Advanced Wildland Fire Technology

Career Preparation

Dendrology

Ecology of Forest Systems

Environmental Interpretation

Forest Measurements

Forest Products

Forest Recreation

Introduction to Forest Surveying Intro to Forestry Field Studies

Occupational Cooperative Work Experience

Principles of Wildlife Management

Silviculture

Watershed Ecology

#### **Faculty Advisor**

Kent Kinney kent.kinney@reedleycollege.edu (559) 638-0300 Ext. 3275

#### **Faculty Advisor**

Joshua Soderlund joshua.soderlund@reedleycollege.edu (559) 638-0300 Ext. 3260

# **Career Corner**

# **Career Opportunities:**

Environmental Organization Employee Environmental Science & Protection Tech.

Firefighter

Fisheries Technician
Forest Biology Technician
Forest Conservation Worker

Forest Fuels Technician Forest Technician Forest Products Industry Employee

Forest Protection Worker Forest/Park Ranger Forest Ranger Rangeland Technician Resource Planner Surveyor Timber Cruiser Wildlife Technician

#### **Career Profile:**

Forest and Conservation Worker

**Overview:** Forest and Conservation Workers develop, maintain, and protect forest, forested areas, and woodlands. They will manage forest protection activities, perform watershed analysis, perform reforestation, and much more. Forest and Conservation Workers may:

- raise and transport tree seedlings
- combat insects, pests, and diseases harmful to trees
- control erosion and leaching of forest soil
- · conduct laboratory or field experiments with plants, animals, insects, diseases and soils
- issue fire permits, timber permits and other forest use licenses
- monitor activities of logging companies and contractors
- provide forestry education to woodlot owners, community organizations, and the general public
- direct crews working on fire lines during forest fires

Future Outlook: Job prospects for Reedley College graduates are strong.

Growth should be strongest in private sector consulting firms and in scientific research and development services. Demand will be spurred by a continuing emphasis on environmental protection, responsible land management, and water-related issues. Federal and State employment opportunities are plentiful.

Salary Opportunities:		LOW	MEDIUM	HIGH
	U.S.	\$20,100	\$31,000	\$46,800
	Fresno	\$22,400	\$34,000	\$47,600



**Source:** Bureau of Labor Statistics, Occupational Employment Statistics Survey; the Labor Market Information Office within the State Employment Security Agency.

# Medium and Heavy Duty Truck Service and Repair

#### Certificate of Achievement -

**Purpose:** Medium and Heavy Duty Truck technicians inspect, repair, and overhaul buses and trucks, or maintain and repair any type of diesel engine. Students successfully completing the outlined course of study will be able to perform entry-level service and repair of Medium/Heavy Duty Trucks. This certificate follows the NATEF Master Accreditation standards: Diesel Engines, Drive Train, Brakes, Suspension and Steering, Electrical/Electronic Systems, Heating, Ventilation & Air Conditioning, Preventative Maintenance, and Hydraulics. Students will be eligible to take the ASE (Automotive Service Excellence) certification tests in the Medium/Heavy Duty Truck area and if successful will earn ASE certifications.

### **Major Courses:**

Equipment Technician: Diesel Engines, Service Fundamentals, Machine Systems Equipment Technician: Transmissions, Torque Converters, & Air Conditioning

Equipment Technician: Electrical, Hydraulic Systems, & Welding Equipment Technician: Fuel Systems & Machine Undercarriage

Heavy Duty Brake Systems

Heavy Duty Suspension and Steering

#### **Faculty Advisor**

Nick Deftereos nick.deftereos@reedleycollege.edu (559) 638-0300 ext. 3736

#### **Faculty Advisor**

Larry Dinis larry.dinis@reedleycollege.edu (559) 638-0300 ext. 3151

#### **Faculty Advisor**

Gary Wenter gary.wenter@reedleycollege.edu (559) 638-0300 ext. 3317

#### **Faculty Advisor**

Juan Rodriguez juan.rodriguez@reedleycollege.edu. (559) 638-0300 Ext. 3428

# **Career Corner**

# **Career Opportunities:**

Diesel Service Technicians and Mechanics (Truck and Bus)
Heavy Vehicle and Mobile Equipment Service Technicians (Construction, Agriculture, and Rail Transportation)
Small Engine Mechanics

#### **Career Profile:**

Diesel Service Technician and Mechanic

**Overview:** Diesel service technicians and mechanics inspect, repair, or overhaul buses and trucks, or maintain and repair any type of diesel engine. Because of their efficiency and durability, diesel engines have become the standard in powering trucks and buses. Diesel technicians handle many kinds of repairs. They may work on a vehicle's electrical system, make major engine repairs, or retrofit exhaust systems with emission control systems to comply with pollution regulations.

Diesel engine maintenance and repair is becoming more complex as engines and other components use more electronic systems to control their operation. In most shops, workers often use hand-held or laptop computers to diagnose problems and adjust engine functions.

In addition to using computerized diagnostic equipment, diesel technicians use a variety of power and machine tools, such as pneumatic wrenches, lathes, grinding machines, and welding equipment. Hand tools, including pliers, sockets and ratchets, and screwdrivers, are commonly used.

Employers typically provide expensive power tools and computerized equipment, but workers generally acquire their own hand tools over time.

**Future Outlook:** Employment of diesel service technicians and mechanics is projected to grow 12 percent from 2014 to 2024, faster than the average for all occupations.

Salary Opportunities:		LOW	MEDIUM	HIGH
	U.S.	\$28,680	\$44,520	\$66,940
(	Fresno	\$25,750	\$41,720	\$64,280



**Source:** Bureau of Labor Statistics, Occupational Employment Statistics Survey; the Labor Market Information Office within the State Employment Security Agency.

# **Plant & Soil Science Program**

### Associate Degree/Certificate of Achievement -

**Purpose:** Reedley College is located in the heart of the San Joaquin Valley, which is the richest and most diverse agricultural region in the nation. The plant and soil science program provides students with the knowledge and skills necessary to become a successful horticulturalist. Each class is designed to provide hands-on experience in commercial grape, vegetable, and tree fruit production through practical farm laboratory experiences.

#### **Faculty Advisor**

Timothy Smith, PhD tim.smith@reedleycollege.edu (559) 638-0300 Ext. 3282

### **Major Courses:**

Ag Accounting

Ag Sales & Communications

**Biometerics** 

Computer Applications in Ag

Farm Management

General Viticulture

Integrated Pest Management

Introduction to Plant Science

Machinery Technology

Occupational Cooperative Work Experience

Plant Nutritian

Pesticides

**Principles of Irrigation Management** 

Soils

Tree and Vine Management

# **Career Corner**

# **Career Opportunities:**

Entomologist Food Scientist

Fruit Sales

Irrigation Designer
Irrigation Management

Orchard Manager

Pest Control Advisor
Pest Control Applicator
Processing Plant Manager

Ranch Manager/Owner

Soil Scientist Viticulturalist

#### **Career Profile:**

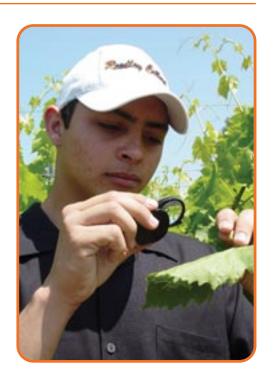
First-Line Supervisor/Manager - Horticulture

**Overview:** Plant scientists study plants, helping producers of food, feed, and fiber crops to feed a growing population and to conserve natural resources. Agronomists and crop scientists not only help increase productivity, but also study ways to improve the nutritional value of crops and the quality of seed, often through biotechnology. Some crop scientists study the breeding, physiology, and management of crops and use genetic engineering to develop crops resistant to pests and drought. Some plant scientists develop new technologies to control or eliminate pests and to prevent their spread in ways appropriate to the specific environment. They also conduct research or oversee activities to halt the spread of insect-borne disease.

Soil scientists study the chemical, physical, biological, and mineralogical composition of soils as it relates to plant growth. They also study the responses of various soil types to fertilizers, tillage practices, and crop rotation. Many soil scientists who work for the Federal Government conduct soil surveys, classifying and mapping soils. They provide Information and recommendations to farmers and other landowners regarding the best use of land and plants to avoid or correct problems, such as erosion. They may also consult with engineers and other technical personnel working on construction projects about the effects of and solutions to soil problems. Because soil science is closely related to environmental science, persons trained in soil science also work to ensure environmental quality and effective land use.

**Future Outlook:** Opportunities should be good for agricultural and food scientists in almost all fields. Those with a bachelor's degree should experience very good opportunities in agriculture and technology and in plant science.

Salary Opportunities:		LOW	MEDIUM	HIGH
	U.S.	\$46,600	\$69,300	\$91,300
	Fresno	\$51,400	\$72,100	\$86,500



**Source:** Bureau of Labor Statistics, Occupational Employment Statistics Survey; the Labor Market Information Office within the State Employment Security Agency.

# Business Department

#### **Department Chair**

David Meier david.meier@reedleycollege.edu (559) 638-0300 Ext. 3320

#### **Dean of Instruction**

David Clark david.clark@reedleycollege.edu (559) 638-0300 Ext. 3361

# **Industry Overview:**

Trends for the future indicate that business careers are plentiful and growing at a fast pace. Career opportunities exist in all aspects of the business world. Business jobs may be entry-level positions which can lead to promotions, management, or executive-level opportunities. Careers in business often allow you to combine your interest, applying business know-how to a particular industry such as healthcare, agriculture, or technology.

# **Reedley College Facilities**

Educational facilities at Reedley College for the business programs include computer labs with state-of-the-art technology and an Entrepreneurship Center.

#### **Career Profiles**

The career profiles in this section offer an in-depth look at some of the many career opportunities in this industry. Getting your start in one of the career technical education programs at Reedley College is the first step toward choosing a career in this industry. For more information, speak to a career counselor about the multitude of career options available.

# **Accounting Program**

### Associate Degree/Certificate of Achievement-

**Purpose:** A student who completes the outlined course of study will be prepared for employment in the accounting field. These students will also have taken classes in a variety of business areas. They will have acquired the skills necessary to do computerized as well as manual accounting. In addition, they will have acquired skills in manufacturing and cost accounting along with statement analysis and report writing. Some students will have acquired additional skills using a computer for word processing and spreadsheets, as well as a ten-key calculator, all of which can be applied in an entry-level position.

# Faculty Advisor Eunji Seo eunji.seo@reedleycollege.edu (559) 638-0300 Ext. 3339

#### **Major Courses:**

Accounting Applications
Applied Accounting
Business & the Legal Environment
Business Communications
Business Mathematics
Calculator Applications
Careers - Business

Computer Concepts
Computerized Accounting
Database Fundamental
Elementary Statistics
Finite Mathematics
Human Relations in Business
Introduction to Business

Macroeconomics
Marketing
Microeconomics
Principles of Accounting
Salesmanship
Spreadsheet Fundamentals

# **Career Corner**

# **Career Opportunities:**

Accountant

Accounts Receivable/Payable Clerk

Bookkeeper

Managerial Accountant

#### **Career Profile:**

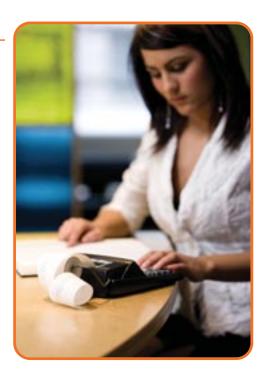
Accountant

**Overview:** Accountants analyze financial information and prepare financial reports to determine or maintain records of assets, liabilities, profits and loss, tax liability, or financial activities within an organization. They examine, analyze, and interpret accounting records in order to give advice or prepare financial statements.

Future Outlook: Job prospects are excellent.

Accountants and auditors will grow faster than the average compared with all occupations in California. Accountants are in demand due to:

- an increase in the number of businesses
- changing financial laws and regulations
- increased scrutiny of company finances
- . replacement of accountants and auditors who retire or transfer
- . an increase in number of business investments and mergers
- growth of international business



<b>Salary Opportunities:</b>	LOW	MEDIUM	HIGH
U.S.	\$31,700	\$49,800	\$88,100
Fresno	\$28,500	\$41,300	\$67,100

**Source:** Bureau of Labor Statistics, Occupational Employment Statistics Survey; the Labor Market Information Office within the State Employment Security Agency.

# **Business Administration Program**

# Associate Degree/Certificate of Achievement-

**Purpose:** This associate of science degree is intended for students who wish to be successful in the business environment. The course of study will prepare the student for employment at both the beginning and intermediate levels of business positions along with beginning and intermediate levels of supervisory positions. They will have acquired the necessary skills, education, and classroom experience to understand how business operates, and the many facets of organizational behavior and employee motivation in the workplace. They will be able to apply these skills immediately in the workplace.

#### **Major Courses:**

**Elementary Statistics** 

Applied Accounting
Business Communications
Careers - Business
Collegiate Entrepreneurs Organization
Computer Concepts

Finite Mathematics
Human Relations in Business
Introduction to Business
Micro Econ
Macro Econ
Occupational Work Experience

#### **Faculty Advisor**

Eric Nasalroad eric.nasalroad@reedleycollege.edu (559) 638-0300 Ext. 3266

#### **Faculty Advisor**

Mike Sorensen mike.sorensen@reedleycollege.edu (559) 638-0300 Ext. 3615

# **Career Corner**

### **Career Opportunities:**

Administrative Services Manager Bookeeper Business Manager Customer Service Representative Event Planner

Independent Sales Representative Supervisor

#### **Career Profile:**

Managers and Sales Representatives

**Overview:** Managers plan, direct, and coordinate activities of an organization. Their specific responsibilities vary by the type of organization and may include keeping records, managing personnel, business development, implementing marketing strategies, and planning and maintaining facilities. Sales agents sell various products and services to businesses and individuals. They contact potential clients, make sales presentations, and maintain client accounts. Other employment areas include

- · real estate sales
- insurance sales
- lodging management
- · event planning
- appraisers
- · human resource management
- supervisors
- customer service representatives
- bookkeeping

**Future Outlook:** Employment of managers is expectied to grow 15 percent from 2010 to 2020, about as fast as the average for all occupations with the realm of business. Tasks such as managing facilities and being prepared for emergencies will remain important in the wide range of industries.





# **Criminology Program**

### Associate Degree/Certificate of Achievement -

**Purpose:** The Criminology Program at Reedley College is designed for anyone interested in law enforcement, the courts, corrections, parole, probation, juvenile authority, or private and industrial security. If you have a passion for serving your community, this program is for you.

### **Faculty Advisor**

George Cartwright george.cartwright@reedleycollege.edu (559) 638-0300 Ext. 3732

### **Major Courses:**

Community Relations
Control and Supervision in Corrections
Correctional Interviewing and Counseling
Criminal Investigation
Criminal Justice Communication

Criminal Law

Introduction to Corrections
Introduction to Criminology

Introduction to Police Ethics
Legal Aspects of Evidence
Multicultural Issues in Public Safety
Police Operations and Procedures
Principles and Procedures of the Justice System

Probation and Parole

The Constitution and Your individual Rights

Vice Control

# **Career Corner**

# **Career Opportunities:**

Correctional Officer Federal Agent
Court Services Parole Officer
Criminal Investigator Police Officer
Deputy Sheriff Probation Officer

State Investigator

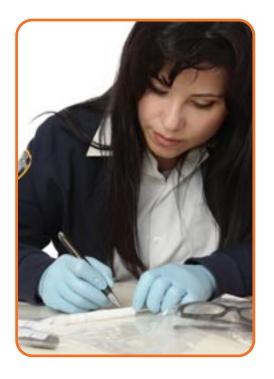
#### **Career Profile:**

Police Officer

**Overview:** Police officers work in partnership with the communities they serve to maintain law and order, protect members of the public and their property, prevent crime, reduce the fear of crime, and improve the quality of life for all citizens. They use a wide range of technology to protect individuals, identify the perpetrators of crime, and ensure successful prosecutions against those who break the law.

Future Outlook: Job prospects are excellent.

While competition will continue to be fierce for patrol officers, well prepared candidates who meet the psychological, personal, and physical qualifications will be able to take advantage of the projected 9% growth in the field.



Salary Oppo	ortunities:	LOW	MEDIUM	HIGH
U.S.	U.S.	\$34,500	\$50,700	\$68,000
	Fresno	\$35,500	\$52,200	\$70,100

# **Information Systems Program**

# Associate Degree/Certificate of Achievement -

**Purpose:** This program provides students with the basic knowledge and skills necessary to pursue a career in information systems. Students completing the Business Department Core courses and the Information Core courses and one of the two options will be able to enter the workforce with a comprehensive understanding of computer basics and a computing specialty (option) that can be applied in business, government, or education. Certificate of Achievement options include Information Systems, Networking, and Programming for the Web. The Associate Degree options are Web Programming & Design and Networking.

# **Major Courses:**

Advanced Database Concepts
Advanced Internet Concepts & Design
Advanced Networking Concepts
Applied Accounting
Business Communications
Business Mathematics
Computer Concepts
Configuring & Troubleshooting
Database Concepts & Design
Elementary Statistics

Finite Mathematics
Fundamentals of Networking
Game Programming
Intermediate Game Programming
Introduction to Business
Intro to Programming
Operating Systems
Visual Basic
Web Developement using HTML and CSS

#### **Faculty Advisor**

Daniel Morales daniel.morales@reedleycollege.edu (559) 638-0300 Ext. 3264

#### **Faculty Advisor**

Everett Sandoval everett.sandoval@reedleycollege.edu (559) 638-0300 Ext. 3267

#### **Faculty Advisor**

David Atencio david.atencio@reedleycollege.edu (559) 638-0300 Ext. 3410

# **Career Corner**

# **Career Opportunities:**

Computer Networking Specialist Computer Software Engineer Computer Support Specialist Game Programmer Database Administrator Information Systems Analyst Programmer Software Publisher Software Specialist Systems Administrator Webmaster

#### **Career Profile:**

Information Systems Analyst

**Overview:** Information Systems Analysts plan and design computer systems, using techniques such as structured analysis, data modeling, and information engineering. Information Systems Analysts may:

- assess the usefulness of pre-developed application packages and adopt them to a user environment
- define the goals of a system and devise flow charts and diagrams describing logical operational steps of programs
- develop, document, and revise system design procedures, test procedures, and quality standards
- expand or modify system to serve new purposes or improve work flow.

Future Outlook: Job prospects are excellent.

Computer systems analysts, database administrators, and computer scientists are expected to be among the fastest growing occupations through 2025.

Information Systems Analysts are in demand due to:

- · rapid growth in computer system design and related services
- the need to replace workers who move into managerial positions, other occupations, or who leave the labor force

Salary Oppo	ortunities:	LOW	MEDIUM	HIGH
	U.S.	\$40,600	\$65,100	\$95,900
	Fresno	\$45,200	\$61,500	\$84,400



# **Office Technology Program**

### Associate Degree/Certificate of Achievement-

**Purpose:** This program prepares the student to efficiently perform general office work including: using application software to create and edit documents, spreadsheets, and database files; managing a records system; sorting and distributing mail; and managing a phone system. Positive communication skills are developed throughout the program.

# **Major Courses:**

Applied Accounting

Championship Keyboarding

Computer Basics
Data Entry Essentials

Document Formatting Filing Procedures

Job Retention and Responsibilities

Keyboarding

Microsoft Access Essentials

Microsoft Excel Essentials
Microsoft Word Essentials
Personal Development
Preparing for a Job Interview
Speed Typing
Spreadsheet Projects
Today's Receptionist
Word Processing Projects

#### **Faculty Advisor**

Pam Gilmore pam.gilmore@reedleycollege.edu (559) 638-0300 Ext. 3786

#### **Faculty Advisor**

Toni Ensz toni.ensz@reedleycollege.edu (559) 638-0300 Ext. 3785

# **Career Corner**

# **Career Opportunities:**

Administrative Assistant General Office Secretary

Office Assistant

Office Manager Receptionist

Word Processing Operator

#### **Career Profile:**

Secretary

**Overview:** Secretaries perform a variety of administrative and clerical tasks to assist professional staff in many industries. Today, secretaries use computers, word processing equipment, and other automated equipment to complete their duties. Secretaries may:

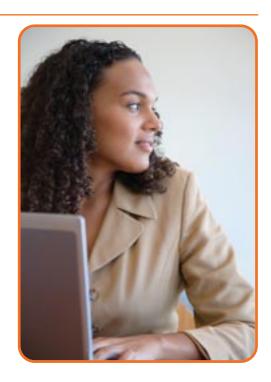
- · monitor and maintain daily office activities and schedules
- operate office machines and equipment and facilitate communications
- screen telephone calls and schedule appointments
- arrange travel for office staff
- · check and route mail
- · draft letters and reports

Future Outlook: Job prospects are strong.

The occupation of secretary ranks among the top 50 largest growth occupations in California.

Most secretarial jobs go to those who have strong computer skills and can work well with other people. The largest number of jobs for secretaries and opportunities for promotions will be in the big cities of California.

Salary Oppo	ortunities:	LOW	MEDIUM	HIGH
	U.S.	\$20,100	\$25,600	\$38,700
	Fresno	\$19,600	\$26,400	\$38,100



**Source:** Bureau of Labor Statistics, Occupational Employment Statistics Survey; the Labor Market Information Office within the State Employment Security Agency.

# *Health Sciences Department*

#### **Department Chair**

Marcy Davidson marcy.davidson@reedleycollege.edu (559) 638-0300 Ext. 3127

#### **Dean of Instruction**

Marie Harris marie.harris@reedleycollege.edu 559 638-0300 Ext. 3353



Combining medical technology and the human touch, the allied health industry administers care around the clock, responding to the needs of millions of people. Allied health services is one of the largest industries in the United States, with about 11.3 million jobs. Due to longer life spans and advancements in medical technology, the allied health industry will continue to grow, and there will be a continued need for skilled healthcare professionals in the future.

# **Reedley College Facilities**

Begin your career in the allied health industry at Reedley College. With state-of-the-art equipment, experienced instructors, and unique programs, Reedley College gives you the skills you need for success.

#### **Career Profiles**

The career profiles in this section offer an in-depth look at some of the many career opportunities in this industry. Getting your start in one of the career technical education programs at Reedley College is the first step toward choosing a career in this industry. For more information, speak to a career counselor about the multitude of career options available.

# **Child Development Program**

### Associate Degree/Certificate of Achievement-

**Purpose:** This program prepares students for careers as preschool administrators, preschool teachers, infant center workers, in-home childcare workers, or teacher's aides in an elementary school or special education class.

### **Major Courses:**

Administration of Early Childhood Programs
Advanced Administration of Early Childhood Programs
Behavior Management
Child Development
Child, Family, & Community
Creative Activities for Children
Cultural Studies
Early Childhood Programs
Exceptional Children

Faculty Advisor
April Barajas
april.barajas@reedleycollege.edu
559 638-0300 ext 3237

#### **Faculty Advisor**

Richell Swallow richell.swallow@reedleycollege.edu (559) 638-0300 ext. 3730

#### **Faculty Advisor**

Nancy Marsh nancy.marsh@reedleycollege.edu (559) 638-0300 Ext. 3249

#### Faculty Advisor / Dept. Chair

Marcy Davidson marcy.davidson@reedleycollege.edu (559) 638-0300 Ext. 3127

# **Career Corner**

Infant - Child Health & Safety Infant - Toddler Curriculum

# **Career Opportunities:**

Curriculum Specialist
Early Intervention Assistant
Family Childcare Provider
Infant and Toddler Teacher

Owner of a Child Care Program Parent Educator Preschool Director Preschool Teacher Program Manager School-Age Teacher Special Education

#### **Career Profile:**

#### Childcare Worker

**Overview:** Childcare Workers nurture and teach children of all ages in childcare centers, nursery schools, preschools, public schools, private households, family childcare homes, and before-and after-school programs. They play an important role in a child's development by caring for the child when parents are at work or away for other reasons.

#### Childcare Workers:

- · tend to children's basic needs
- organize activities that stimulate the children's physical, emotional, intellectual, and social growth
- · help children explore their interests
- help children develop their talents and self-esteem
- · help children learn how to get along with others

**Future Outlook:** Job prospects should be excellent. Employment of Childcare Workers is projected to grow about as fast as the average for all occupations through the year 2024.

Childcare Workers are in demand due to:

- the number of children in childcare and preschool programs is likely to increase
- the large numbers of workers who leave these jobs every year, creating good job opportunities

Salary Oppo	ortunities:	LOW	MEDIUM	нідн
	U.S.	\$19,130	\$28,750	\$51,900
	Fresno	\$24,642	\$30,168	\$40,899



# **Dental Assisting Program**

# Associate Degree/Certificate of Achievement -

**Purpose:** The Dental Assisting Program at Reedley College is a nine-month program for which the student receives a Certificate of Achievement. Classes begin in mid-August and end in mid-May. The Dental Assisting Program courses are approved by the Dental Board of California. Students learn dental office procedures including oral radiology, chairside assisting, office management, dental specialties, biodental sciences, and coronal polishing. The combination of the laboratory, lecture, and clinic hours prepare the students to take the state licensing examination (RDA).

#### Program Director/ Faculty Advisor

Lois Parento lois.parento@reedleycollege.edu (559) 638-0300 Ext. 3483

#### **Faculty Advisor**

Shelly Sorensen shelly.sorensen@reedleycollege.edu (559) 638-0300 Ext. 3371

### **Major Courses:**

Dental Assisting 1 Dental Assisting 2 Dental Assisting 3

# **Career Corner**

# **Career Opportunities:**

Endodontics General Dentistry Oral Surgery Orthodontics Periodontics

#### **Career Profile:**

#### **Dental Assistant**

**Overview:** Dental Assistants are part of the dental care team that helps dentists during dental exams and treatments. The Dental Assistant gets patients ready for examination and makes sure they are relaxed and comfortable. Working chairside, the Dental Assistant performs a variety of patient care, office, and laboratory duties.

Dental Assistant duties may include:

- selecting instruments for the dentist
- sterilizing and disinfecting instruments
- · applying sealant material
- · pouring, trimming, and polishing casts
- exposing dental diagnostic X-rays
- · scheduling and other office duties

Future Outlook: Job prospects should be excellent.

Dental Assistants are in demand due to:

a rise in population growth

- greater retention of natural teeth
- greater awareness of the importance of dental care
- increased ability to pay for services
- dentists devoting more time to more profitable procedures

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Salary Oppo	ortunities:	LOW	MEDIUM	HIGH
	U.S.	\$17,600	\$27,200	\$40,400
	Fresno	\$16,500	\$25,300	\$36,400



**Source:** Bureau of Labor Statistics, Occupational Employment Statistics Survey; the Labor Market Information Office within the State Employment Security Agency.

# **Healthcare Interpreter Program - Spanish**

### Certificate of Achievement

**Purpose:** The Healthcare Interpreter Spanish Program's purpose is to prepare bilingual and bicultural individuals with the skills necessary for effective language interpretation in healthcare settings, to bridge the cultural gap, to develop cultural competency, and to improve linguistic and cultural communication for healthcare clients. Spanish Interpreters will utilize these skills in a medical environment to provide accurate healthcare information and perform cultural advocacy as required by California State law.

#### **Faculty Advisor**

Jose Arrezola jose.arrezola@reedleycollege.edu (559) 638-0300 ext. 3439

#### **Major Courses:**

Healthcare Interpreting 1
Healthcare Interpreting 2
Healthcare Interpreting Field Work

# **Career Corner**

# **Career Opportunities:**

Clinics Medical Offices
Dental Offices Medical Specialities
Hospitals School Nurse Offices

#### **Career Profile:**

Healthcare Interpreter

**Overview:** Healthcare Interpreters work in healthcare settings such as hospitals, convalescents homes, and medical offices. They translate spoken words from one language into another to express an approximate and/or exact translation between the healthcare providers and patients. Interpreters and translators enable the cross-cultural communication necessary in today's society. They must thoroughly understand the subject matter in which they work, and they must remain sensitive to the cultures associated with their languages of expertise. The program requires an internship of 50 hours in a medical setting.

There are two levels of interpreters, certified and non-certified. The courts require that all interpreters be certified. Eight languages in Fresno County require a State certification process; Arabic, Cantonese, Japanese, Korean, Tagalog, Vietnamese, Portuguese, and Spanish.

Future Outlook: Job prospects are strong.

The largest non-English language group, Spanish-speaking Latinos, are one-third of the population of California. The impact of this demographic will increase the demand for healthcare interpreters.

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Salary Opp	ortunities:	LOW	MEDIUM	HIGH
	U.S.	\$19,500	\$32,600	\$54,100
	Fresno	\$18,500	\$27,500	\$38,600

# **Nursing Assistant Training (NAT) Program**

#### Certificate of Achievement -

**Purpose:** Nursing Assistant Training provides a course of instruction which prepares students to perform in the role of Certified Nursing Assistant (CNA) - upon passing the state required certification test. CNAs provide direct, basic, hands-on care to patients and residents in acute hospital settings, free-standing clinics, long term and assisted living facilities, and home care settings.

Program Coordinator
Manjit Dhillon
manjit.dhillon@reedleycollege.edu
(559) 638-0300 Ext. 3218

### **Major Courses:**

Nursing Assistant Training Theory 102 Nursing Assistant Training Clinical 103

# **Career Corner**

# **Career Opportunities:**

Certified Nursing Assistant

#### Career Profile:

Certified Nursing Assistant

**Overview:** CNAs are responsible for many aspects of care needed to maintain a patient's comfort and to promote health and well being. Caring, respectful, and personable attitudes and behaviors are essential in helping sick, debilitated, frail and dependent patients and/or residents. CNAs function under the direct supervision of Licensed Nurses who are either Registered Nurses or Vocational Nurses.

NAT training is completed in one 18-week semester at Reedley College. Only students who pass the course may take the state certification exam, and then if successful, may seek employment. Applicants must comply with health industry regulations and requirements including penal code background checks, fingerprinting, liability insurance, physical exam, and immunizations. Highly recommended prep courses which promote student success include English 125 and 126, Math 250, Office Technology (OT) 10 - Medical Terminology.

The NAT program adheres to the state model curriculum covering all essential topics needed to prepare students to perform in the role of Nursing Assistant. Mandatory state certification is governed by the California Department of Health Services (DHS).

Future Outlook: Job prospects should be excellent.

Nursing Assistants are in demand due to:

- Shortage of health care workers
- · Increased demand for health care services
- The life expectancy for American's has gone up and the baby boomers are now in their late 50s and 60s
- Certified Nurse Assistants are the back bone of the LTC delivery system

Salary Oppo	ortunities:	LOW	MEDIUM	HIGH
	U.S.	\$17,700	\$19,800	\$21,900
	Fresno	\$17,500	\$19,500	\$21,600



**Source:** Bureau of Labor Statistics, Occupational Employment Statistics Survey, the Labor Market Information Office within the State Employment Security Agency.

# Industrial Technology Department

#### **Department Chair**

David Richey david.richey@reedleycollege.edu (559) 638-0300 Ext. 3318

#### **Dean of Instruction**

David Clark david.clark@reedleycollege.edu (559) 638-0300 Ext. 3361

# **Industry Overview:**

The pressures of global competition are forcing industries, especially those in manufacturing, to use technology to improve productivity. Computer and other electronic communications are improving the way business is done. Being ready for a new job in a new economy requires a strong technical background. There is a wide variety of exciting opportunities in various technical fields. Some of the best jobs are yet to be created and will be available to those who are prepared.

### **Reedley College Facilities**

Reedley College students enrolled in Industrial Technology programs have access to state-of-the-art facilities. The 18,000 square foot Machine and Welding Technology lab contains the latest in conventional and Computer Numeric Control (CNC) equipment and current welding machines. Aviation Technology occupies a 20,000 square foot facility housing both fixed and rotary winged aircraft, and also has access to an aircraft runway on school grounds. Automotive Technology instructors, all Certified Master Mechanics by the National Institute for Automotive Service Excellence (ASE), work in an 18,000 square foot lab containing lifts, service bays, and equipment for working on modern automobiles.

#### **Career Profiles**

The career profiles in this section offer an in-depth look at some of the many career opportunities in this industry. Getting your start in one of the vocational programs at Reedley College is the first step toward choosing a career in this industry. For more information, speak to a career counselor about the multitude of career options available.



# 28 Automotive Technology Program (Automotive Repair Technician):

### Associate Degree/Certificate of Achievement -

**Purpose:** This program provides students with knowledge and skills to perform diagnosis and repair of various automotive components and enter the automotive service industry at the advanced apprentice level. Subjects include: brakes, suspension, electrical systems, engine repair, engine performance, air conditioning, manual trans/axles, automatic transmissions, and California BAR smog, brake, and lamp licenses.

### **Major Courses:**

Auto 9

Automotive Technician 10
Automotive Technician 11

#### **Faculty Advisor**

Rudy Guzman rudy.guzman@reedleycollege.edu (559) 638-0300 Ext. 3292

#### **Faculty Advisor**

Nino Garza nino.garza@reedleycollege.edu (559) 638-0300 Ext. 3479

#### **Faculty Advisor**

Stephen Rosendale stephen.rosendale@reedleycollege.edu 559 638-0300 Ext. 3251

# **Career Corner**

# **Career Opportunities:**

Automatic Transmission/Transaxle Automotive Repair Technician Brakes

California Emission Inspection

California Lamp/Brake Inspection Electrical Systems Engine Performance (Tune-up) Engine Repair Heating/Air Conditioning Manual Drive Train/Rear Axle Suspension/Steering

#### **Career Profile:**

Automotive Repair Technician

**Overview:** The work of Automotive Repair Technicians has evolved beyond the traditional role of mechanic into a high technology job. Automotive technician training teaches integrated electronic systems and the computer programs that run vehicles and measure their performance.

Automotive Repair Technicians will:

- · work with electronic diagnostic equipment
- work with computer-based technical reference materials
- · perform diagnostic tests

**Future Outlook:** Job prospects should be very good. Jobs will be in demand for those who continually adapt to changing technology and repair techniques as vehicle components and systems become increasingly sophisticated.



 U.S.
 \$21,020
 \$37,850
 \$63,330

 Fresno
 \$21,840
 \$38,200
 \$65,270

Source: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2016-17 Edition, Automotive Service Technicians and Mechanics, on the Internet at https://www.bls.gov/ooh/installation-maintenance-andrepair/automotive-service-technicians-and-mechanics.htm (visited March 09, 2017).

# **Aviation Maintenance Program**

### Associate Degree/Certificate of Achievement-

**Purpose:** As one of only 23 federally-approved Aviation Maintenance Technology programs in California, the AMT program at Reedley College provides students with the technical and hands-on training necessary to perform maintenance on aircraft powerplants, aircraft components, and aircraft systems. Students in this program are prepared for a career in one of the world's most exciting industries. The Reedley College Aviation Maintenance Technology Program staff is not only committed to teaching the required skills, but is also dedicated to helping students become quality aviation professionals. Graduates of the program are prepared to take the Federal Aviation Administration (FAA) written, oral, and practical exams required for certification. The 1,900 hour curriculum consists of 45 subject areas and is organized into twenty four blocks of instruction offered over a period of four semesters. Students may enter the program in August or January.

### **Major Courses:**

AMT 11	AMT 13	AMT 22	AMT 31	AMT 33	AMT 42
AMT 11L	AMT 13L	AMT 22L	AMT 31L	AMT 33L	AMT 42L
AMT 12	AMT 21	AMT 23	AMT 32	AMT 41	AMT 43
AMT 12L	AMT 21L	AMT 23L	AMT 32L	AMT 41L	AMT 43L

#### **Faculty Advisor**

Jason Asman jason.asman@reedleycollege.edu (559) 638-0300 Ext. 3243

#### **Faculty Advisor**

David Richey david.richey@reedleycollege.edu (559) 638-0300 Ext. 3318

#### **Faculty Advisor**

Keith Zielke keith.zielke@reedleycollege.edu (559) 638-0300 Ext. 3474

# **Career Corner**

# **Career Opportunities:**

Aerospace Company Employee Aircraft Manufacturing Employee Airframe & Powerplant Technicians Airline Technician Aviation Maintenance Technician General Aviation Technician Government Employee

### **Career Profile:**

Aviation Maintenance Technician

**Overview:** To keep aircraft in peak operating condition, aircraft and avionics equipment mechanics, and service technicians perform scheduled maintenance, make repairs, and complete inspections required by the FAA. Many aviation maintenance technicians specialize in preventive maintenance.

Aviation Maintenance Technicians will:

- · inspect engines, landing gear, instruments, and pressurized sections
- inspect accessories such as brakes, valves, pumps, and air conditioning systems
- · perform necessary maintenance and replacement of parts

**Future Outlook:** Opportunities should be excellent, but competition is likely for the best paying airline jobs.



<b>Salary Opportunities:</b>	LOW	MEDIUM	HIGH
U.S.	\$34,770	\$58,370	\$89,050
Fresno	\$44,440	\$67,330	\$89,810

# Flight Science Program

# Associate Degree/Certificate of Achievement-

**Purpose:** The Flight Science Program at Reedley College provides students with the academic knowledge and flight training experience necessary to become a professional airplane pilot and flight instructor. The curriculum is designed to accommodate students with no previous flying experience. Courses will systematically prepare individuals to test for the certificates and ratings required to operate airplanes as a pilot. The program takes five semesters to complete. It is recommended to take flight courses through the summer. At the end of the program, the successful graduate will hold a commercial airplane pilot certificate, an airplane flight instructor certificate, and be eligible for a job as a flight instructor/pilot.

#### **Faculty Advisor**

John Johnson john.johnson@reedleycollege.edu (559) 638-0300 Ext. 3475

#### **Major Courses:**

FLGHT 105 Private Pilot Flight Lab FLGHT 125 Commercial Pilot Flight Lab FLGHT 115 Instrument Pilot Flight Lab FLGHT 135 Flight Instructor Flight Lab

# **Career Corner**

# **Career Opportunities:**

Airline Pilot Agricultural Pilot
Airplane Flight Instructor Commercial Pilot
Air Taxi Pilot Corporate Pilot

#### **Career Profile:**

Airline Pilot

**Overview:** Airline and commercial airplane pilots fly and navigate airplanes. Airline pilots fly for airlines that transport people and cargo on a fixed schedule. Commercial pilots fly aircraft for other purposes, such as charter flights, rescue operations, firefighting, aerial photography, and aerial application, also known as crop dusting.

**Future Outlook:** Graduates will be immediately eligible for entry-level pilot/flight instructor positions. Job opportunities should continue to be excellent. Employment of commercial pilots is projected to grow 10 percent from 2014 to 2024, faster than the average for all occupations. Most job opportunities will arise from the need to replace pilots who leave the workforce. From 2014 to 2024, many pilots are expected to retire as they reach the required retirement age of 65.



Salary Opp	ortunities:	LOW	MEDIUM	HIGH
	U.S.	\$34,800	\$76,150	\$147,890
	Fresno	\$34,800	\$76,150	\$147,890

# **Machinist Program**

### Associate Degree/Certificate of Achievement -

**Purpose:** The Manufacturing Technology Machine Tool Pathway provides training for students wishing to prepare for a career in manufacturing or fabrication trades. Emphasis is placed on practicing conventional, hands-on skills necessary for an individual to be successful in either conventional or computerized numeric control (CNC) types of manufacturing.

Faculty Advisor
David Tikkanen
david.tikkanen@reedleycollege.edu
(559) 638-0300 Ext. 3313

# **Major Courses:**

Advanced Machine Shop Manufacturing Essentials

Electricity Hydraulics

Intro to Machine Shop

Intermediate Machine Shop

Summer Internship Intro to Welding

Machine Shop Certification Preparation

# **Career Corner**

# **Career Opportunities:**

Job Shop Machinist Machinist Machine Shop Supervisor CNC Operator CNC Set-up Person

#### **Career Profile:**

#### Machinist

**Overview:** Machinists use machine tools, such as lathes, milling machines, and grinders, to produce precision metal parts. Although they may produce large quantities of one part, precision machinists often produce small batches of one-of-a kind items. They use their knowledge to the working properties of metals and their skill with machine tools to plan and carry out the operations needed to make machined products that meet precise specifications. The parts that machinists make range from bolts to automobile pistons.

Machinists first review electronic or written blueprints or specifications for a job before they machine a part. Next, they calculate where to cut or bore into the workpiece—the piece of steel, aluminum, titanium, plastic, silicon, or any material to remove. They then select tools and materials for the job, plan the sequence of cutting and finishing operations, and mark the workpiece to show where cuts should be made.

After this layout work is completed, machinists perform the necessary machining operations. They position the workpiece on the machine tool—drill press, lathe, milling machine, or other type of machine—set the controls, and make the cuts. During the machining process, they must constantly monitor the feed rate and speed of the machine. Machinists also ensure that the workpiece is properly lubricated and cooled because the machining of metal products generates a significant amount of heat. The temperature of the workpiece is a key concern, because most metals expand when heated; machinists must adjust the size of their cuts relative to the temperature.

**Future Outlook:** Job opportunities for machinists should continue to be good, as employers value the wide-ranging skills of these workers.

Salary Opportunities:		LOW	MEDIUM	нідн
	U.S.	\$24,300	\$38,800	\$59,700
	Fresno	\$24,000	\$38,000	\$59,000



**Source:** Bureau of Labor Statistics, Occupational Employment Statistics Survey, the Labor Market Information Office within the State Employment Security Agency.

# **Manufacturing Maintenance Mechanic Program**

# Associate Degree/Certificate of Achievement -

**Purpose:** The Manufacturing Maintenance Mechanic Program provides training for students wishing to pursue a career in the maintenance trade. Students will learn industrial maintenance basics. With a combination of hands-on training and detailed textbook work, students will be able to diagnose problems and come up with solutions in a timely manner.

#### **Faculty Advisor**

Michael Ornelas michael.ornelas@reedleycollege.edu (559) 638-0300 Ext. 3477

#### **Major Courses:**

Blueprint Reading Motor Controls Welding Certification

Electricity Summer Internship PLCs

Hydraulics Intro to Welding Solar Technology

Industrial Materials Intermediate Welding or Machine Shop
Intro to Machine Shop
Advanced Welding or Machine Shop

# **Career Corner**

# **Career Opportunities:**

Maintenance Mechanic

#### Career Profile:

Maintenance Mechanic

**Overview:** A maintenance mechanic is proficient in a vast amount of skills from: welding, machine tool, hydraulics, electricity, motor controls, and fabrication. Maintenance mechanics work on all parts of equipment from bearings and shafts to VFDs and motor starters. They repair machinery by fabricating new parts or repairing damaged components.

Future Outlook: Job opportunities are excellent.

Jobs are concentrated in repairing and maintaining equipment with a huge emphasis in agricultural related machinery.



Salary Opportunities:	LOW	MEDIUM	HIGH
U.S.	\$24,200	\$38,500	\$59,700
Fresno	\$24,000	\$38,000	\$59,000

# **Welding Program**

### Associate Degree/Certificate of Achievement -

**Purpose:** The Manufacturing Technology Welding Program provides training for students wishing to pursue a career in the welding trade. Emphasis is placed on practicing control of welding heat to maintain an optimal weld puddle and produce a strong weld. Practice exercises similar to those found in the American Welding Society (AWS) certification test are provided.

#### **Faculty Advisor**

Robert Fransen robert.fransen@reedleycollege.edu (559) 638-0300 Ext. 3253

### **Major Courses:**

Manufacturing Essentials Intro to Machine Shop Electricity Hydraulics Summer Internship Intro to Welding
Intermediate Welding
Advanced Welding
Welding Certification

# **Career Corner**

# **Career Opportunities:**

Production Line Welder Welder Fabricator Welding Shop Supervisor

#### **Career Profile:**

Welder

**Overview:** Welders use many types of welding equipment set up in a variety of positions, such as flat, vertical, horizontal, and overhead. They may perform manual welding, in which the work is entirely controlled by the welder, or semiautomatic welding in which the welder uses machinery, such as a wire feeder, to perform welding tasks.

Because of its strength, welding is used in:

- shipbuilding
- · automobile manufacturing and repair
- · aerospace applications
- · machinery manufacturing
- · constructing buildings, bridges, and other structures
- joining pipes in pipelines, power plants, and refineries

Future Outlook: Job opportunities should be excellent.

Jobs are concentrated in machinery manufacturing (agriculture, construction, and mining machinery), and architectural and structural metals manufacturing.



Salary Opportunities:		LOW	MEDIUM	нідн
	U.S.	\$24,200	\$38,500	\$59,700
	Fresno	\$24,000	\$38,000	\$59,000

**Source:** Bureau of Labor Statistics, Occupational Employment Statistics Survey; the Labor Market Information Office within the State Employment Security Agency.