CAREER & TECHNICAL EDUCATION
2019-2020 PROGRAMS
CAMPUS SPOTLIGHT: SANTA RITA

FEATURING 2 NEW PROGRAMS:
DENTAL ASSISTING
DIESEL ENGINE REPAIR

PLUS CURRENT CTE COURSES:
3-D ANIMATION
BIOSCIENCE
BUSINESS MANAGEMENT
COMPUTER SCIENCE
CONSTRUCTION TECHNOLOGIES
CULINARY ARTS
AUTOMOTIVE:
- Auto Collision Repair
- Automotive Technologies
- Diesel Engine Repair

BUSINESS:
- Business Management
- Business Operations
- Marketing

HEALTH SCIENCES:
- Bioscience
- Dental Assisting
- Home Health Aide
- Pharmacy Support Services
- Sports Medicine

CONSTRUCTION TECHNOLOGIES

CULINARY ARTS

COMMUNICATIONS MEDIA:
- Digital Photography
- Digital Printing
- Film & TV Production
- Graphic and Web Design
- Digital Communication
- Music & Audio Production

ELECTRONIC TECHNOLOGIES

ENGINEERING:
- Computer Science
- Engineering
- Mechanical Drafting

HUMAN SERVICES:
- Early Childhood Education
- Law and Public Safety

MANUFACTURING:
- Precision Machining
- Welding Technologies

HIGH SCHOOLS THAT OFFER CTE PROGRAMS:
- CATALINA
- CHOLLA
- PALO VERDE
- PUEBLO
- RINCON
- SABINO
- SAHUARO
- SANTA RITA
- TUCSON
- UNIVERSITY
Extended day opportunities are options for students to fulfill course offerings after the regular school day. Classes meet from 3:30 p.m. - 5:30 p.m. Monday, Tuesday and Thursday. Transportation and meals are provided.

**CULINARY ARTS** SCHOOLS OFFERING THIS PROGRAM:

**DENTAL ASSISTING** SCHOOLS OFFERING THIS PROGRAM:

**DIESEL ENGINE REPAIR** SCHOOLS OFFERING THIS PROGRAM:

**HOME HEALTH AIDE** SCHOOLS OFFERING THIS PROGRAM:
Students are introduced to the auto collision industry using the industry endorsed curriculum I-CAR, manufacturing recommendations and industry standards as guides. There will be an introduction to structural and beginning refinishing. Automotive collision is a field that incorporates both artistic and technical skills. This is a Pima JTED enhanced program.

Students analyze theories and principles of the 4-stroke engine, maintenance and repair of modern automobiles. Classes include safety and hazardous materials handling, mechanical inspection or testing of various automobile operating systems. Learning through written, PC based, and hands-on assignments strengthens the understanding of complexities of the automobile. This is the first step to an exciting career in the automotive transportation career. This is a Pima JTED enhanced program, community college credit may be available and there may be extended day opportunities.
SCHOOLS OFFERING THIS PROGRAM:

AUTOMOTIVE – DIESEL ENGINE REPAIR

Diesel Engine Repair 1,2 – Grades 9-11 prepares the student to apply technical knowledge and skills in the safety, adjustment, maintenance, part replacement and the use of tools, equipment and machines as they relate to basic automotive care.

Diesel Engine Repair 3,4 – Grades 10-11 prepares the student to apply technical knowledge and skills in the safety, adjustment, maintenance, part replacement and the use of tools, equipment and machines as they relate to basic automotive care, electrical functions in automotive applications and the repair, service and maintenance of diesel engines. Must have completed Diesel Engine Repair 1,2

Diesel Engine Repair 5,6 – Grades 11-12 prepares the student to apply technical knowledge and skills in the safety, adjustment, maintenance, part replacement and the use of tools, equipment and machines as they relate to basic automotive care. electrical functions in automotive applications and the repair, service and maintenance of diesel engines. In addition, student will be exposed to the beginning principles and concepts of pneumatics and hydraulics. Must have completed Diesel Engine Repair 1,2 & 3,4

AUTOMOTIVE – DIESEL ENGINE REPAIR

Heavy vehicle and mobile equipment service technician
Marine, Fire, Mining and Military equipment technician
BUSINESS OPERATIONS

Business Operations is for students interested in performing the duties of a support professional in a business setting. Training is included in professional communications, business technology operations, forms design, records management, report preparation, intro to business law, decision making, and career preparation. This is a Pima JTED enhanced program, and community college credit may be available.

MARKETING

Marketing students are introduced to the Marketing, Management, and Entrepreneurship program standards designed to prepare students for employment in various sales, customer service, advertising and promotion, and first-line positions in wholesale, retail, and service establishments. The program enables students to explore, understand, and apply marketing, management, and entrepreneurial principles. This is a Pima JTED enhanced program, and community college credit may be available.

BUSINESS MANAGEMENT

Business Management Administrative Services students learn the process of business operations and explore starting, owning and managing a business by addressing the Business Management and Administrative Services standards. This is a Pima JTED enhanced program and community college credit may be available.

CAREERS

**BUSINESS MANAGEMENT**

- Business Manager
- Operations Manager
- Corporate Executive
- Entrepreneur
- Human Resources Specialist
- Financial Planner
- Marketing Specialist

**BUSINESS OPERATIONS**

- Business Manager
- Administrative Assistant
- Public Relations Specialist

**MARKETING**

- Advertising Manager
- Media Coordinator
- Product Manager
- Sales Director
- Public Relations Specialist
- Market Analyst

**SCHOOLS OFFERING THIS PROGRAM:**

- [Logo]
- [Logo]
- [Logo]
HEALTH SCIENCES

BIOSCIENCE

SCHOOLS OFFERING THIS PROGRAM:

Bioscience students use multiple modern molecular lab techniques such as micro pipetting, DNA extraction, DNA amplification and visualization of DNA on electrophoresis gels to investigate authentic research questions. Classes may collaborate with a research lab to do authentic research-based projects, acquire skills needed to pursue higher education and to enter industry workforce in careers related to Bioscience.

This is a Pima JTED enhanced program and college credit may be available.

DENTAL ASSISTING

SCHOOLS OFFERING THIS PROGRAM:

Dental Assisting 1,2 - Grades 10-11
This first-year course provides instruction based on the basic skills essential to working successfully with patients and co-workers in dental offices and clinics. These skills include: study skills, vital signs, communication in the dental environment and job entry skills. In addition, students are introduced to the principles and techniques of dental assisting including: anatomy, physiology, microbiology, oral pathology, and nutrition relating to dental health.

Dental Assisting 3,4 – Grade 12
This second-year course provides more extensive instruction on the principles and techniques of dental assisting: tooth morphology of human dentition, hand and rotary dental instruments, instruments used in various operative procedures, and chairside procedures. In addition, principles of dental radiography as a diagnostic aid are taught, including radiation protection and biology. Students also learn about clinic experiences in exposing, processing, mounting, and interpreting radiographs on mannequins using a variety of radiographic techniques.

Must have completed Dental Assisting 1,2

CAREERS

BIOSCIENCE
Clinical Cytogeneticist
Genetics Counselor
Nanotechnologist
Biomedical Engineer
Biochemist
Genetic Engineer

DENTAL ASSISTANT
Dental Hygienist
Radiologist Technologist
Surgical Technologist
Neurodiagnostic Technologist
Endoscopy Technologist

TUCSON UNIFIED
SCHOOL DISTRICT
2019-2020
HEALTH SCIENCES

HOME HEALTH AIDE
SCHOOLS OFFERING THIS PROGRAM:
In this course, students explore health related and medical careers. This and is a prerequisite for all JTED Central Healthcare Pathway programs. Upon successful completion, the following pathways are offered: Junior: Certified Caregiver, Health Information Management (JTED Central Campus Hybrid Class) Medical Assisting, EMT, Physical Therapy Tech and LNA. Sophomore: Pathway to Health Information Management (JTED Central Campus Hybrid Class) This is a Pima JTED enhanced course. This course has extended day offerings.

PHARMACY TECHNICIAN
SCHOOLS OFFERING THIS PROGRAM:
The course prepares students to apply academic and technical knowledge and skills of the Pharmacy Technician in a clinical, medical or retail setting or to continue into postsecondary education. This is a Pima JTED enhanced course, and community college credit may be available.

SPORTS MEDICINE
SCHOOLS OFFERING THIS PROGRAM:
Students apply academic and technical knowledge and skills related to industry standards and practices of Sports Med/Athletic Training. This course introduces students to the field of sports medicine and the professionals working in the Sports Medicine field. Students learn about athletic injuries and anatomy of the human body. In the Advanced lab, experience working in the athletic training room is a requirement. This is a Pima JTED enhanced program.
Construction Technology Students are introduced to and apply the Construction Technologies program standards designed to prepare students for careers in the Construction Industries. Standards are aligned with the National Center for Construction Education & Research (NCCER). This is a Pima JTED enhanced program and community college credit may be available.

CAREERS

Construction Laborer, Foreman, Manager
Civil & Electrical Engineer
Architect, Carpenter, Mason, Plumber
Electrician, Cost Estimator
Construction & Building Inspector
The Culinary Arts program prepares students to apply technical knowledge and skills required for food production and service occupations in institutional and commercial food establishments. This is a Pima JTED enhanced program and has extended day offerings.

CULINARY
SCHOOLS OFFERING THIS PROGRAM:

CULINARY
Chef/Pastry Chef/ Baker
Restaurant/Bakery Owner, Manager
Prep Cook
Food Engineer
Food Service Manager
Dietician

CAREERS

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TUCSON Unified
SCHOOL DISTRICT
2019-2020

CTE
CAREER DRIVEN EDUCATION
DIGITAL PRINTING

Students develop skills in computer layout and design, presswork, digital platemaking procedures, plate making, and finishing applications. Students learn about safety, history of printing, measurement, layout, color management, customer service, supply management, darkroom processing, press operation and binding & finishing. Students are introduced to Adobe Photoshop, InDesign, and Illustrator. Students explore art design, photography, and marketing and create products such as postcards, brochures, invitations, screen prints, posters and logo design for their professional portfolio. This is a Pima JTED enhanced program and community college credit may be available.

PHOTOGRAPHY

Students develop a working knowledge of digital photographic techniques, theory, history, and learn how to use digital cameras to demonstrate their creativity. Students are introduced to digital manipulation techniques and software, including Adobe Photoshop. Students also learn the fundamentals of art, the history of photography and study famous photographers’ works and styles. This is a Pima JTED enhanced program and community college credit may be available.

SCHOOLS OFFERING THIS PROGRAM:

PHOTOGRAPHY
- Photojournalist
- Videographer, Cinematographer
- Camera Operator, Portrait Photographer
- Photo Editor
- Photo Retouch Specialist
- Event, Sports Photographer
- Magazine Advertising

DIGITAL PRINT
- Layout Artist
- Brand, Identity, Logo Design
- Illustrator
- Multimedia Designer
- Prepress Technician
- Art Director/Creative Director

CAREERS

COMMUNICATIONS MEDIA

2019-2020
SCHOOLS OFFERING THIS PROGRAM:

GRAPHIC WEB/ DESIGN
Students create and explore traditional and digital art as a means of visual communication, use Apple iMac computers with Adobe and Apple software to create designs for print and the web. Traditional hand drawing is taught as a means to practice layout and design skills prior to creating the design on the computer. Students participate in critiques to interpret, analyze, and evaluate graphic design pieces from a contemporary, historical and cultural perspective. All students create designs, are critiqued and revise. Designs are included in a professional portfolio. This is a Pima JTED enhanced program and community college credit may be available.

FILM AND TV
Students analyze the media industry, business practices and the role in the economy, intellectual property laws and rights and verbal, and non-verbal communication skills. Students utilize computer applications, capture and manipulate digital images, and use editing software from concept to completion. Students analyze, evaluate and write for television and film. This is a Pima JTED enhanced program and community college credit may be available.

CAREERS

GRAPHIC WEB DESIGN
Web Developer, Administrator
Computer Engineer, Programmer
Multimedia Designer
Animator

FILM AND TV
Broadcast Journalist
Career in Communications
Reporter/ Correspondent
Journalist
Broadcast News Analyst

COMMUNICATIONS MEDIA
MUSIC AND AUDIO PRODUCTION

Students are introduced to music theory, instrumental and vocal technique and history. Students perform at school concerts, participate in the technical and management areas of the performing arts and the entertainment industry. Students develop the skills needed for postsecondary studies. This is a Pima JTED enhanced program.

DIGITAL COMMUNICATIONS

Students learn to utilize computer applications to capture and manipulate digital images. Students analyze, evaluate and write news items including news stories, features, columns, and op-ed pieces. Capstone products are newspapers &/or yearbooks. Students in the third year are highly encouraged to assume a leadership role as a staff editor. This is a Pima JTED enhanced program.

CAREERS

DIGITAL COMMUNICATIONS
- Journalists
- Reporter
- News Analysts
- Film/Video Editor
- Technical Writer

MARIACHI
- Audio Engineer
- Radio/Television Announcer
- Performance Artist
- Musician
- Teacher
ELECTRONICS

SCHOOLS OFFERING THIS PROGRAM:

Students are introduced to and apply the Electronic program standards, including interpreting blueprints, schematics of systems, knowledge of electricity concepts, knowledge of electronic quantity units and circuits. This is a Pima JTED enhanced program and community college credit may be available.

CAREERS

ELECTRONICS
Engineering Technician
Electronic Equipment Installer
Information Technology Manager
Electronic Repair Technician
Electronic Drafter
ENGINEERING

COMPUTER SCIENCE  SCHOOLS OFFERING THIS PROGRAM:
Year 1 Introduction to Computer Science explores computational thinking and programming concepts through project-based learning. Year 2 AP Computer Science Principles focuses on fundamentals of computing, problem solving, working with data, understanding the Internet, cyber security and programming. Year 3, AP Computer Science, uses industry standard Java programming language and presents topics built around problem solving. This is a JTED enhanced program. This program has extended day offerings and students may earn college credit.

ENGINEERING  SCHOOLS OFFERING THIS PROGRAM:
Students learn to design, develop and validate projects. Prerequisite: in both electrical and embedded software design. Advanced projects focus on a research project with detailed plans and schedules for investigation of engineering concepts. Third year students utilize a robotics theme to manage schedules, design considerations and technical issues. This is a Pima JTED enhanced program.

MECHANICAL DRAFTING  SCHOOLS OFFERING THIS PROGRAM:
Mechanical Drafting Design Students are introduced to the Drafting/Design Technology program standards to prepare students to apply technical skills, create working drawings and computer simulations for a variety of applications. This is a Pima JTED enhanced program and community college credit may be available.

CAREERS

COMPUTER SCIENCE
Software Applications Developer
Computer Systems Analyst
Computer Systems Engineer
Network Systems Administrator
Database Administrator
Business Intelligence Analyst
Web Developer
Computer Programmer
Software Systems Developer
Software Quality Assurance Tester

ENGINEERING
Civil, Biomedical, Chemical, Electrical, Computer Robotics
Environmental, Aerospace, Mechanical, Nuclear Mining

MECHANICAL DRAFTING
Civil Engineer
Drafter
Mapping Technician
Engineering Technician
Architect
Interior Designer

Tucson Unified School District 2019-2020
LAW, PUBLIC SAFETY AND SECURITY

Students apply academic and technical knowledge and skills related to industry standards and practices in a variety of settings within Law, Public Safety and Security services. This is a Pima JTED enhanced program and community college credit may be available.

EARLY CHILDHOOD PROFESSIONS

This course introduces students to the technical knowledge and skills associated with Early Childhood Education, preparing them to understand the physical, mental and social growth of children for occupations in Early Childhood Education. This is a Pima JTED enhanced course and community college credit may be available.

CAREERS

LAW, SAFETY & SECURITY
Police, Security, Corrections, Border Patrol
CIA/FBI Agent
Detective
Lawyer
Emergency Dispatcher
Probation Officer
Crime Scene Documentation

EARLY CHILDHOOD EDUCATION
Daycare Provider, Business Owner
Early Education Teacher
Child Development Specialist, Counselor
Child Psychologist
Preschool Teacher

SCHOOLS OFFERING THIS PROGRAM:

HUMAN SERVICES

TUCSON Unified SCHOOL DISTRICT

2019-2020

CTE CAREER DRIVEN EDUCATION
WELDING TECHNOLOGIES

Students are introduced to and apply technical knowledge and skills to join or cut metal surfaces. Students learn how to weld and make different projects using various metals. This is a Pima JTED enhanced program and community college credit may be available.

CAREERS

PRECISION MACHINING
Mechanical Engineer
Manufacturing Engineer
Computer Numerical Control
Machine Programmer
Control Machine Operator
Manual Machinist
Mechanical Inspector
Electrical Discharge Machine Operator

WELDING
Arc Welder, Underwater Welder,
General Welder, Fabricator, Cutter
Welder fitter, Maintenance Welder
66 TUSD1 CTE PROGRAMS
73 INTERNSHIPS
160 CERTIFICATIONS
214 ASSESSMENTS PASSED
5059 TUSD1 CTE STUDENTS

TUCSON Unified
SCHOOL DISTRICT
2019-2020

CTE
CAREER Driven EDUcation
FOR MORE INFORMATION ABOUT CTE PROGRAMS
OFFERED AT TUCSON UNIFIED SCHOOLS:
520-225-4652
HTTP://WWW.TUSD1.ORG/CTE