



# Updates & New Courses 2017-2018



## HVAC program - Heating Ventilation Air Conditioning/ Grades 11 & 12

Students will gain knowledge and skills needed to enter the industry as a HVAC Technician. Students will acquire knowledge and skills in safety, electrical theory, HVAC tools, building codes, installation of commercial HVAC equipment, heat pumps, building science, troubleshooting techniques, various duct systems, and maintenance practices. Students will have the opportunity to test for their HVAC Technician Level 1 and EPA 608 Certification. This course is a dual credit program offered with NCTC. The courses students will register for are HART 1307, 1301, 1256, 1341 and RBPT 1300. Students will be required to provide their own transportation to Ryan High School.



**Cosmetology:** Starting next year the Cosmetology Program starts in the 10<sup>th</sup> grade. Students who are interested need to attend the mandatory meeting.

## Law and Government Courses (11-12)



Many of the ATC Law and Government Courses have changed for next year. (Check Grade Level)

- National Security (1 Credit)
- Political Science (1 Credit)
- Forensic Science (1 Credit)
- Disaster Response (1 Credit)
- Criminal Investigation (1 Credit)
- \*Court Systems and Practices (1 Credit)

Select  
any 2



- \*Law Enforcement I (1 Credit & \*Pre -Rec for Practicum)
- \*Law Enforcement II (1 Credit)

\*Pre -Rec for  
Practicum

## Project Lead the Way – Engineering

**Grades 9-12 Credits: 1**

- Year 1: Introduction to Engineering Design (GHS 9-12)
- Year 1 or Second Course: Digital Electronics\* (GHS 10-12)



**Courses listed below offered at the ATC**

- Year 2: Engineering Science\* (ATC 11-12)
- Year 2: Robotics 1\* (ATC 11-12)
- Year 3: Engineering Design & Problem Solving\* (ATC 12)
- Year 3: Engineering Design & Presentation\* (ATC 12)

\*Courses must be taken in the correct sequence. Check the course catalog for courses that meet the 4<sup>th</sup> Science Credit Requirement.

## COURSE CHANGES

OLD COURSE NAME	NEW COURSE NAME
ALLIED HEALTH/ALLIED HEALTH ANATOMY & PHYSIOLOGY	ALLIED HEALTH PATHOPHYSIOLOGY and ANATOMY & PHYSIOLOGY (ATC)
PRINCIPLES OF ARCHITECTURE	ARCHITECTURAL DESIGN 1
DIGITAL & INTERACTIVE MEDIA	PRINCIPLES OF ARTS, A/V TECH, COMMUNICATIONS
FOOD AND NUTRITION	INTRO TO CULINARY ARTS

\*Some courses at the ATC such as: Animation, Graphic Design, Commercial Photography, A/V Production, Computer Maintenance, Aircraft Airframe Technology, and CISCO may have revisions such as names changes, grade level changes, and credit values. (Change in Child Guidance credits and requirements)

## NEW COURSES

- Principles of Arts, A/V Tech, Comm (9<sup>th</sup>-12<sup>th</sup>)
- Principles of Manufacturing (9-12)
- Principles of Cosmetology (10<sup>th</sup>)
- Criminal Investigation (11<sup>th</sup> or 12<sup>th</sup>)
- HVAC program (11-12<sup>th</sup>)
- Political Science (11<sup>th</sup> or 12<sup>th</sup>)
- Practicum in Law, Public Safety, Corrections & Security (12<sup>th</sup>)
- Robotics I (must be in PLTW program)
- AC/DC Electronics (11-12)
- Solid State Electronics (11-12)
- Restaurant Management Practicum (11-12)
- (See the following pages for course descriptions)

## IMPORTANT INFORMATION / DEADLINES

Planning to take the **Health Science** course at the ATC next year? There will be a mandatory parent and student meeting at GHS on **Feb 22nd at 5:30pm. Principles of Health Science is a Prerequisite** for the Health Science and EMT program at the ATC. If you need to take Principles of Health Science you need to enroll today for the Principles of Health Science online course. Enrollment deadline January 31<sup>st</sup>.

All Health Science advanced course at the ATC in the Health Science sequence require Principles of Health Science and Health Science. Plan accordingly!

**Cosmetology** mandatory student parent meetings for current 9<sup>th</sup> and 10<sup>th</sup> graders are February 21<sup>st</sup> or February 28<sup>th</sup> at the ATC from 6:30-8:00.

**CTE Advanced Technology Complex:** All ATC Courses have fees and several GHS CTE courses have fees.

Information may change - For the most up to date information reference the Course Selection Catalog for 2017-2018

## Academic Credit for CTE Options

Science	Math
Food Science (12) (1)	Accounting II (11-12) (1)
Allied Health Anatomy & Physiology (12) (1) (ATC)	Fine Arts
Advanced Animal Science (11-12) (1)	Floral Design (10-12) (1)
Engineering Design & Problem Solving (12) (1) (ATC)	Speech
Forensic Science (12) (1) (ATC)	Professional Communications (9-12) (.5)
Allied Health Pathophysiology (12) (1) ATC	
Engineering Science (11-12) (1)	

### DISD CTE Contact Information:

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Listed below are the new CTE Course descriptions for more information and a complete list of courses visit the Course Selection Catalog online.

## Business and Industry Endorsement

### Principles of Arts, Audio/Video Technology and Communications

**Grade Placement ..... 9-12 Credits ..... 1 Prerequisite ..... None**

Through the study of digital and interactive media and its application in information technology, students will analyze and assess current and emerging technologies, while designing and creating multimedia projects that address customer needs and resolve problems. Students implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. The knowledge and skills acquired and practiced will enable students to successfully perform and interact in a technology-driven society. Students enhance reading, writing, computing, communication, and critical thinking and apply them to the information technology environment.

### HVAC Dual Credit Program

**Grade Placement ..... 11-12 Credits ..... 2 Prerequisite ..... None**

Students will gain knowledge and skills needed to enter the industry as a HVAC Technician Students will acquire knowledge and skills in safety, electrical theory, HVAC tools, building codes, installation of commercial HVAC equipment, heat pumps, building science, troubleshooting techniques, various duct systems, and maintenance practices. Students will have the opportunity to test for their HVAC Technician Level 1 and EPA 608 Certification This course is a dual credit Program offered with NCTC. The courses students will register for are HART 1307, 1301, 1256, 1341 and RBPT 1300. Students will be required to provide their own transportation to Ryan High School.

### Introduction to Culinary Arts

**Grade Placement ..... 10-12 Credits ..... 1 Prerequisite ..... None**

Introduction to Culinary Arts will provide a foundation in basic food production, nutrition and sanitation, and management and services. As part of the instruction, reinforcement of basic skills is provided to assist students in practicing communication skills, utilizing listening skills to follow directions, practicing basic math skills as applied to a culinary arts setting. Students will gain insight into a careers in the Hospitality and Tourism field.

### Restaurant Management Practicum

**Grade Placement ..... 11-12 Credits ..... 2 Prerequisite ..... None**

**Location .....Advanced Technology Complex**

**Partnership ..... Texas Restaurant Association and Greater Dallas Restaurant Association.**

Restaurant Management introduces students to the basic management techniques and administrative practices and procedures of the restaurant and food service industry. This course focuses on the following areas of study: food preparation, food purchasing, food and beverage cost control, sanitation and safety, customer service, human resource management, beverage management, hospitality marketing and dining room management services.

## Public Service Endorsement

### Political Science I

**Grade Placement** ..... 11-12 **Credits** ..... 1 **Prerequisite** ..... None

**Location** ..... Advanced Technology Complex

Political Science course introduces students to the political theory through the study of governments; public policies; and political processes, systems and behaviors. The student learns to independently collect and critically analyses information about politics, and to argue comparative politics.

### Criminal Investigation

**Grade Placement** ..... 11-12 **Credits** ... 1 (Accelerated: Double Blocked for One Semester) **Prerequisite** ... None

**Location** ..... Advanced Technology Complex **Partnerships** ..... Denton Police Station

Criminal Investigations course will focus on basic functions of criminal investigations and procedures. Students will learn terminology, and investigating processing, evidence collection, fingerprinting, and courtroom presentation. Students will collect and analyze evidence from a simulated crime scene.

### Practicum in Health Science

**Grade Placement** ..... 12 **Credits** ... 2

**Emergency Medical Technician (Dual Credit Program) (Senior Only) Started 2017-18 School Year**

**Prerequisite: Principles of Health Science, (Health Science will be a prerequisite starting in 2017-18)**

This course provides an introduction to the normal structure and function of the body, including an understanding of body systems in maintaining homeostasis with principles of microbiology also included. The course uses a method of instruction providing detailed education, training and work-based experience, and direct patient/client care, generally at a clinical site. Instruction includes all the skills necessary to provide emergency medical care at a basic life support level with an ambulance service or other specialized services. The Emergency Medical Technician (EMT) courses provides instruction to prepare students for EMT certification. This course is a dual credit program offered with NCTC . The courses students will register for are VNSG 1420, EMSP 1160 & 1501. The EMT curriculum is based on the National EMS Educational Standards.

### Allied Health Pathophysiology

**Grade Placement** ..... 12 **Credits** .... 1 **Prerequisite** ..... Biology and Chemistry

**Location** ..... Advanced Technology Complex **Partnerships** ..... North Central Texas College

The pathophysiology course is designed for students to make informed decisions using critical thinking and scientific problem solving, Students in this class will study disease processes and how humans are effected. Emphasis is placed on prevention and treatment of disease. Students will differentiate between normal and abnormal physiology. This course counts as a Science credit.

### Introduction to Cosmetology/Principles of Cosmetology Design/Color Theory

**Grade Placement** ..... 10-12 **Credits** .... 2 **Prerequisite** ...None

**Location** ..... Advanced Technology Complex

This course will provide a foundation of academic, career and technical skills needed to be successful in the Cosmetology field. The students in this course will develop knowledge and skills regarding various cosmetology design elements, sanitation procedures, hair care, nail care, skin care and work place skills. Students will begin to earn hours toward their state licensing requirements.

## STEM Endorsement

### Robotics I - (Project Lead The Way Engineering Sequence)

**Grade Placement** ..... 11-12 **Credits** .... 1 **Prerequisite** ... Introduction to Engineering Design/Digital Electronics

**Location** ..... Advanced Technology Complex

**Partnerships** ... University of North Texas Engineering Department, Bell Helicopter, Batteries Plus

Robotics 1 course was designed to introduce the students to the fundamentals of problem solving, program design, algorithms and programming using a high-level language. This course introduces the fundamental concepts of programming and robotics. Programming and building robots applies science, technology, engineering and math (STEM) concepts. Students will have the opportunity to complete multiple challenges involving guided research, problem solving, working in teams, and design documentation.

### Engineering Science (Project Lead The Way Engineering Sequence)

**Grade Placement** ..... 11-12 **Credits** ..... 1 (Accelerated: Double Blocked for One Semester)

**Prerequisite** .... IED, DE, Robotics

**Location** ..... Advanced Technology Complex

**Partnerships** ... University of North Texas Engineering Department, Bell Helicopter, Batteries Plus

Engineering Science is designed to help students understand the field of engineering and engineering technology. Exploring various technology systems and manufacturing processes help students learn how engineers and technicians use math, science and technology in an engineering problem solving process to benefit people. The course also includes concerns about social and political consequences of technological change. Students will have the opportunity to test for university credit. The course counts as a 4th Science credit for graduation.

## **Engineering Design & Problem Solving (Project Lead The Way Engineering Sequence)**

**Grade Placement ..... 12**

**Credits ..... 1 (Accelerated: Double Blocked for One Semester) (4th SCIENCE CREDIT)**

**Prerequisite .... IED, DE, Robotics, Engineering Science, Algebra I and Geometry**

**Location ..... Advanced Technology Complex**

**Partnerships ..... University of North Texas Engineering Department, Bell Helicopter, Batteries Plus**

Engineering Design & Problem Solving is an applied physics course designed to provide a study in force, work, rate, resistance, energy, power and force transformers as applied to mechanical, fluid, thermal, and electrical energy. Students learn to apply principle theories to the design and development process through project-based lessons where they create a variety of projects to meet specific goals. The course counts as a 4th Science credit for graduation.

## **Engineering Design & Presentation (Project Lead The Way Engineering Sequence)**

**Grade Placement ..... 12 Credits .... 1 (Accelerated: Double Blocked for One Semester)**

**Prerequisite .... IED, DE, Robotics, Engineering Science, Engineering Design & Problem Solving**

**Location .... Advanced Technology Complex**

**Partnerships .... UNT Engineering Department, Bell Helicopter, Batteries Plus**

Engineering Design and Presentation is the course that allows you to design a solution to a technical problem of your choosing. Now is the time to eliminate one of the "Don't you hate it when..." statements of the world. This course is an engineering research course in which you will work in teams to research, design, and construct a solution to an open-ended engineering problem. The product development lifecycle and a design process will be used to guide and help your team reach a solution to the problem. You and your team will present and defend your solution to a panel of outside reviewers at the end of the school year.

## **AC/DC Electronics**

**Grade Placement ..... 11-12 Credits ..... 1 Prerequisite ..... Recommended: Digital Electronics**

**Location .....Advanced Technology Complex**

**Partnerships ..... International Society of Certified Electronics Technicians (ISCET)**

AC/DC Electronics focuses on the basic electricity principles of alternating current/direct current circuits. Students will demonstrate knowledge and applications of circuits, electronic measurement and implementation. Through the use of the design process, students will transfer academic skills to component design in project based environment.

## **Solid State Electronics**

**Grade Placement ..... 11-12 Credits ..... 1 Prerequisite .... AC/DC Electronics**

**Location ..... Advanced Technology Complex**

**Partnerships ..... International Society of Certified Electronics Technicians (ISCET)**

In Solid State Electronics, Students will demonstration knowledge and application of advanced circuits, electronic measurement, and electrical implementation used in the electronics and computer industries. Students will transfer advanced academic skills to apply engineering principles and technical skills to troubleshoot, repair and modify electronic components, equipment, and power 16 electronic systems in a project based learning environment.

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