

Overview of CTE Learning Applications

Modeling and General Applications



zSpace Studio by zSpace is a rich model exploration and presentation tool that allows students to compare, dissect, analyze, measure, annotate, and explore thousands of 3D models from the zSpace Model Gallery.



Leopoly Maker by Leopoly introduces students to the world of 3D creation by helping them create, customize, and prepare digital objects for 3D modeling and printing.



Tinkercad by Autodesk is a simple, online 3D design and printing app for everyone. With zSpace, creators are able to visualize designs in an AR/VR environment with more accurate representation.



Geogebra Classic by Geogebra allows students to manipulate and learn geometry and algebra concepts. Students can also use the Graphing Calculator feature for functions, geometry, algebra, calculus, and 3D math.



Unity Programming for zSpace, teaches students how to develop interactive applications for zSpace using the Unity Educator Toolkit with the zSpace Supplement. This toolkit provides a robust teaching environment and encourages students to further their Unity development skills.



BlocksCAD3D by BlocksCAD is the graphical, engaging, and effective way to teach coding, where the outcome is improved math & computer science skills.

Health Sciences and Public Services



VIVED Anatomy by VIVED is a high quality visual and interactive software for learning anatomy in 3D. It enables users to view the human body and perceive spatial relationships like never before.



Human Anatomy Atlas by Visible body is an award-winning human anatomy general reference application. Students can explore bodily systems, over 4,600 anatomical structures, musculoskeletal animations, and thousands of quizzes.



Virtual ECG by Vizitech allows students to practice ECG electrode placement, understand the relationship between electrode placement and the ECG strip, and study abnormal ECGs.



True 3D Scholar by EchoPixel is a proprietary software application that enables a user to visualize and interact with CT and MRI DICOM image data to assist in medical education



Criminal Justice by Certify-ED allows students to process a crime scene to its fullest extent. Students will explore the areas and talk to witnesses prior to entering the scene.



Dental by Leopoly supports dental assistant students with a variety of 3D experiences for lifelike dental training. Examine virtual living body structures, discover relationships between various organs, and learn about dental problems and procedures.



Biotechnology by Certify-ED provides the students with a solid foundation in biotechnology. Learn about biotechnology career paths, research, data analysis, laboratory safety, and the use of laboratory equipment.

Manufacturing and Skilled Trades



Advanced Manufacturing Hydraulics by Fun2 utilizes 3D model components, animations, and system building to provide students with the structural relationships and working principles needed to develop proficiency of fluid power components and hydraulic systems.



Industrial Robotics Expert by GTAFE allows students to bring the textbooks to life with a particular focus on preparing them for industry standards. Content includes electrical, hydraulic, mechanical, and pneumatic principles.

Manufacturing and Skilled Trades (continued)



Advanced Manufacturing Mechanical by Fun2 allows students to explore simulated 3D model components and animations to develop the fundamentals needed in a wide variety of manufacturing processes including production, logistics, and maintenance.



Industrial Robotics Mechanical by GTAFE allows students to practice assembly/disassembly, with a particular focus on preventative maintenance, and common procedures for manufacturing robots.



Advanced Manufacturing Pneumatics by Fun2 allows students to explore simulated 3D model components and animations to develop the fundamentals needed in a wide variety of manufacturing processes including production, logistics, and maintenance.



HVAC by Labtech introduces the student to the basics of refrigeration and air conditioning. The trainer is a fully operational unit that contains the basic components found in many refrigeration and air conditioning systems.



Industrial Controls by NIRTEC is a suite of applications for learning, designing, programming and simulating Programmable Logic Controllers (PLCs). You will be able to learn how to use the automatic control systems utilized in the industry with just your zSpace.



VIVED Construction by VIVED, students will be able to build a chalkline, layout a framed house and explore the necessary tools needed to construct the core elements of a residential home.

Transportation



VR Automotive Expert by GTAFE is the first of its kind, 3D interactive study guide for automotive training. Students can interact with customized courses, run simulations of various automotive systems, and access 3D resources allowing them to prepare for industry certifications in transportation.



VR Automotive Mechanic by GTAFE allows students to practice the assembly and disassembly of an automobile and its various systems within a virtual mechanic environment. Safety is guaranteed while students master the sequences, and repeatable repair procedures.



VR Electric Automotive Mechanic by GTAFE provides students and instructors with high voltage safety procedures, failure simulations, and training examination. Students experience component and system failures, fault diagnosis, maintenance, and repair procedures.



VR Automotive Diagnostics by GTAFE consists of three settings modules (circuit diagram failure, random failure, and failure type). It simulates the whole process of automotive failure diagnosis, offering display of failures and related data, random failure and related maintenance, failure type and corresponding maintenance, and data in case of no failure.



VR Hybrid Automotive by GTAFE is comprised of three modules: engine, transaxle, and principles of powertrain. It offers the structure, principles, disassembly and assembly of Prius engine and transaxle, as well as Overall working principles and energy flow module of the powertrain.



Electrical Control VR Instruction by Fun2 features the structures and working principles of low-voltage electrical appliances in lifelike AR/VR. Students gain a deep understanding of electrical controls thorough animations of model parts, exploded and perspective views of each component, and control circuit building tasks.



Experiences by zSpace includes experiential-based simulations of Earth, Life, and Physical Science topics allowing students to manipulate content while learning abstract concepts.



Franklin's Lab by zSpace guides students through electricity concepts and troubleshooting faulty circuits. Students can work in a sandbox with electrical components, follow guided zSpace activities, and repair broken switches and motors.

Agri-Science



VIVED Science by VIVED is a comprehensive package of detailed, interactive dissection experiences focused on learning and exploring Human Anatomy, Botany, Zoology, Earth Science, Microbiology, Chemistry, Engineering, and Paleontology.



Canine Anatomy VR Trainer by GTAFE is a powerful teaching tool offering veterinary students practical training of the canine integumentary, skeletal, muscular, digestive, respiratory, urinary, circulatory, lymphatic, endocrine, and nervous systems.



Wave NG Welding by MIMBUS provides students with hands-on training in welding gestures and MAG, through a series of exercises performed with a hand-held welding simulator.



zSpace Studio by zSpace - Genetics opportunities
Students will consider how genetic mutation, which affects the muscles in the heart, impacts the person's life. Students studying biomedical sciences or health sciences will find this lesson aligned with their curriculum.