Technology Center of DuPage



DuPage Area Occupational Educational System (DAOES)

TECHNOLOGY CENTER OF DUPAGE (TCD)



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Technology Center of DuPage prepares juniors and seniors for college and a career through nineteen advanced career and technical education electives. It is operated by joint agreement among 14 member high school districts, including District #204.

Students spend part of each school at the TCD campus, located at 301 S. Swift Road between North Avenue and Army Trail Road in Addison. Transportation to and from TCD is provided by Lyons Township District #204.

Opportunities through TCD include dual credit (both high school and free, transferable college credit at the same time), available industry certifications or licenses, and the chance to explore a career before making important college decisions. The only cost to the student is a flat participation fee of \$100 (exception: Cosmetology – see the TCD website for information).

For further information, students should contact their counselor, take the TCD field trip in the fall, read the TCD program guide, or visit the TCD website (www.tcdupage.org) for complete information about the following electives:

TCD Programs

Architecture & Construction

Construction Trades HVACR/Residential Wiring

Arts, A-V Technology & Communications

Multimedia & Television Production

Education & Training

Early Childhood Education & Care

Health Science

Medical Assisting Medical Terminology & Healthcare Careers Nursing Assistant Training Program

Hospitality & Tourism

Professional Cooking, Baking & Service

Human Services

Cosmetology

Information Technology

Computer Information Systems & & Game Design

Law, Public Safety, Corrections & Security

Criminal Justice Fire Science Emergency Medical Technician

Manufacturing

Precision Engineering & Design Technology Welding Technology

Robotics & Automation Technology

Science, Technology, Engineering, & Math (STEM)

Electronics Technology ELEMC Courses

Transportation & Logistics

Auto Body Repair & Refinishing Automotive Technology



TCD Mission/Vision

Technology Center of DuPage will provide an educational environment that supports and encourages individual learning styles, develops occupational skills, fosters professionalism, promotes academic growth, and assists students in discovering their potential. All students attending Technology Center of DuPage will be prepared to successfully transition to post-secondary education and careers.

TCD General Information

The TCD campus is located in Addison, IL, approximately 30 minutes from LTHS North Campus. A student who enrolls in one of the programs attends TCD for three hours during the morning session each weekday and attends LT the other portion of the school day. Students earn 1.5 credits per semester and 3.0 credits per year. Programs/ Courses are posted both in the Guide and on the TCD website: www.tcdupage.org. The most up-to-date course information is on the TCD web page. Information in The Guide is for planning purposes only.

A student who desires to enroll in a particular TCD program should review the course descriptions and LTHS pre-requisites and Lyons Township High School basic graduation requirements. Counselors will provide additional information and an application for enrollment at TCD.

There are deadlines to register for programs at TCD. A student who wishes to attend must turn in a completed application to his/her counselor one week in advance of the registration process. If the student's application is received after this deadline, his/her name will be placed on a waiting list.

Prerequisites

In general, juniors and seniors who have completed 2 years of English, Mathematics, and Science at LT are eligible for enrollment at TCD. A few programs have specific LT prerequisites which students must meet; others have suggested but not mandatory prerequisites. It is important for students and parents to consult each program's web page for syllabus information and academic recommendations. Most programs offer college credit, so are essentially a college level classs.

College Credit through TCD Programs/Courses

Most TCD programs offer dual credit or articulated college credit. Dual credit means earning high school through TCD and free college credit simultaneously through College of DuPage. This credit appears on the student's high school transcript and is transferable to any school that accepts COD credit. Articulated credit is awarded after enrolling with a specific college or university, sometimes after successfully completing a test or other prerequisites.

Through TCD, students may:

- Reinforce academic skills through hands-on applications in a self-paced, goal-by-goal learning environment.
- Earn industry-recognized certifications or prepare for state, federal, professional, or national licensing exams.
- Create an effective résumé and workplace skills portfolio, valuable for applications or interviews for scholarships, colleges, or jobs.
- Build workplace skills and confidence through experience: job shadowing, internships, or TCD's own student-run shops and labs.
- •Research the post-secondary educational options and scholarship opportunities; in the past four years, TCD seniors were awarded over \$1.3 million in scholarships.

What TCD Is and Is Not

TCD is not a separate educational institution, a trade school, or a college. It is part of LT's elective courses, and course offerings are supplemented to LT's curriculum. TCD has a strong academic focus on teaching basic principles of math, science, communications, and technology. However, TCD never underestimates the importance of real-world skills development in securing satisfying, well-paying employment. That's why TCD's unique combination of classroom instruction, career skills building, and hands-on experience is so effective in preparing students for today's high-performance workplace.



The Technology Center of DuPage is regarded as one of the Midwest's finest schools for career studies.

Participation Fee

The flat participation fee includes educational supplies, equipment, materials, and/or course book purchase or rental. Additional fees may include supplies purchased directly from a vendor or specialized curricula. See www. tcdupage.org for the latest and most complete information. In no case should a program fee prevent a student from enrolling in a Technology Center of DuPage program.

ARCHITECTURE/CONSTRUCTION

Construction Trades

Credit: 1.5 (Semester)
3.0 (Annual)

Grade Offered: 11, 12

Annual TC9280
Fall TC9281
Spring TC9282

Prerequisite: Recommended - Introduction to

Furniture Making

This program provides the hands-on experiences, cutting-edge tools, and step-by-step learning modules to develop your basic talents for successful progression to entry-level employment, a postsecondary apprenticeship, or a college-level construction management program. Step one is tackling those must-have basics: job-site safety, the proper use of hand and power tools, and construction math. Develop your carpentry skills in new construction as well as additions, renovations, and repairs on existing structures. You will have hands-on experience in framing through a variety of applications: walls and ceilings, floors, roofing, and windows and doors. Related specialized skills include drywall installation and finishing; trimwork; plan/blueprint reading; and site layout. Projects start small and expand as your skills develop. College credit available.

forced-air, hydronic, electrical, and oil-based heating systems, and air conditioning systems. Advanced skills include sheet metal fabrication, light commercial HVACR equipment, and the opportunity to earn EPA 608 refrigerant certification. Understand the career pathways in residential service, new construction, and commercial property maintenance.

Well-trained technicians can integrate, install, and troubleshoot a variety of residential subsystems, including wiring, cabling, HVACR, security, audio, and other technologies

technologies.

This course also covers the basics of safety, terminology, National Electric Code, and proper use of tools and testing equipment. Learn the fundamentals of circuits, outlets, lighting distribution panels, low voltage wiring, high voltage wiring, network wiring, and system planning. Rough in, trim out, and retrofit wiring in a residential room. Advanced topics include digital signal theory, conduit installation, and system testing / troubleshooting. College credit available.

Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR)/Residential Wiring

Credit: 1.5 (semester) Level: III

Grade Offered: 11, 12 Annual TC9110

Fall TC9111 Spring TC9112

Prerequisite: None

3.0 (Annual)

HVACR technicians work in a different setting every day, or are part of a team that manages the challenging systems of a large complex like Willis Tower. Learn the safety, mechanical, and electronic fundamentals needed to become a qualified HVACR technician. Master the theory and electrical skills critical for successful postsecondary training. Install, maintain, and repair residential



ARTS, A-V TECHNOLOGY & COMMUNICATION

Multimedia & Television Production

Credit: 1.5 (Semester) Level: III

3.0 (Annual)

Grade Offered: 11, 12 Annual TC9480 Fall TC9481

Spring TC9482

Prerequisite: Recommended - 1 semester of

Keyboarding or Keyboarding Proficiency

Test

Go behind the scenes in the multi-billion dollar entertainment industry, from local news to commercials to webcasts. Skills include computer editing using Final Cut Pro and AVID; digital video and audio; multi-track recording; set design; script writing and story boarding; studio and remote lighting; video graphics; and animation. Work as part of a production team in TCD's private HD television studio, rotating jobs such as floor director, camera operator, lighting director, and control booth team. 9 hours dual college credit through College of DuPage. Earns college credit.

EDUCATION & TRAINING

Early Childhood Education and Care

Credit: 1.5 (semester) Level: III 3.0 (Annual)

Grade Offered: 11, 12

Annual TC9210
Fall TC9211
Spring TC9212

Prerequisite: Child Development

Successful completion of this program gives the student the skills necessary to seek employment as a child care assistant or continue their education at the college level for lead preschool teacher or elementary education teacher. Students will have the opportunity to learn to: prepare developmentally appropriate activities for preschool children; implement activities in TCD's laboratory preschool for 3 to 5 year olds; understand the basic emotional, social, intellectual and physical development of the preschool child; and participate in extended campus work experiences. Students may prepare for the Child Development Associate (CDA) credential and earn 4 hours dual credit with the College of DuPage. TCD was the first DuPage high school to offer early childhood program that offers the Level 1 Early Care & Education (ECE) Credential through INCCRRA (Illinois Network of Child Care Resource & Referral Agencies). After graduation from high school, the credentialed student qualifies for a scholarship to pursue an ECE associate's degree at a community college. This financial aid can continue for further post-secondary education; find more information at this program's webpage, www.tcdupage.org. Earns college credit.

HEALTH SCIENCE

Medical Terminology & Healthcare Careers

Credit: 1.5 (Semester) Level: III

3.0 (Annual)

Annual TC9080

Grade Offered: 11, 12

Fall TC9081 Spring TC9082

Prerequisite: Recommended - 1 year of Chemistry and 1 semester of Keyboarding or Keyboarding Proficiency Test

Admission to college healthcare programs (i.e. medical assisting, nursing, radiology, surgical technology, occupational or physical therapy, and many others) is very competitive. Many colleges require a biomedical terminology course as a prerequisite to admission to such programs. With an opportunity to earn dual credit for a comprehensive biomedical terminology course and overview of health science pathways and careers, this program can be your head start.

You will learn extensive biomedical terminology as it relates to each body system and to healthcare careers and medical specialties. Classes are taught by a licensed registered nurse, and guest speakers may include other healthcare professionals. You will use and apply your knowledge through a combination of interactive handson activities; (dissection, specimen analysis, dental impressions, etc.); medical reports and case studies; word games; and multimedia activities. Along the way, you may also learn basic healthcare skills such as CPR and infection control practices. In addition to strengthening science and language arts skills through anatomy and medical terminology, you will explore select medical math topics and learn job-seeking skills. 8 hours of dual credit is available through College of DuPage. Earns college credit.



Nursing Assistant Training Program

Credit: 1.5 (Semester) Level: III

3.0 (Annual)

Grade Offered: 11, 12 Annual TC9120 Fall TC9121

Spring TC9121

Prerequisite: Recommended - 1 semester of

Keyboarding or Keyboarding Proficiency

Test

This is a Basic Nurse Assistant Training Program approved by the Illinois Department of Public Health. If you're a junior or senior determined to succeed, you can meet the state requirements, including a clinical experience, for certification in one year. Learn about caring for patients; reporting observations; and understanding body systems, the nature of disease, and common health problems. Master the medical terms and communication skills critical to an effective healthcare environment. You will learn how to safely move, lift, and transport patients; measure and record vital signs; perform personal care and technical skills; and respond to a variety of patient conditions. Your acquired knowledge of basic healthcare skills, even if you do not achieve certification, will prepare you to work in assisted living facilities as well as private duty home care.

Certification Eligibility: You are eligible to take the state competency exam if you successfully complete the program and meet IDPH certification criteria, including mandatory Saturday or after school clinical sessions, and possession of a valid Social Security number. See the program webpage for more eligibility requirements. Upon passing the state exam, you will be certified as a Nursing Assistant (CNA), enabling you to seek employment in long-term care facilities, agency home care, hospitals, or other healthcare facilities. After high school graduation, you may also apply to a nursing degree program. 7 hours dual credit is available through College of DuPage. Prepares you for a certification exam. Optional courses available at additional fees. Earns college credit.

Medical Assisting

Credit: 1.5 (Semester) Level: III 3.0 (Annual)

Grade Offered: 12 Annual TC9090 Fall TC9091

Prerequisite: Senior standing

Spring TC9092

TC9092

Medical assistants deal with patient care and assessment, perform treatments and administer medications. They also provide assistance to doctors and other health care professionals. Medical assistant training programs cover a variety of courses pertaining to health, office administration and patient care. This program is open only to students who will be SENIORS during the 23-24 school year.

HOSPITALITY & TOURISM

Professional Cooking, Baking & Service

Credit: 1.5 (semester) Level: III

3.0 (Annual)

Grade Offered: 11, 12 Annual TC9360

Fall TC9361 Spring TC9362

Prerequisite: Culinary Arts

In your first year, begin with ServSafe® -- a short certification course in food safety for managers -- followed by measurement and kitchen skills common to a range of industry pathways. Explore those pathways in a three-week rotation through cooking, baking, and service careers and the rest of the year is your choice: Cooking or Baking Curriculum. In one year, you have the opportunity to earn certifications and dual credit (both high school and college credit).

Second year students spend six weeks in C-B-S Boot Camp, working in small teams to design and develop a foodservice concept. Then for three weeks your team will run that concept (managing a crew of first year students) through TCD's Bistro, Deli, or Gateway Café service areas. The remainder of the year is Baking or Cooking, the reverse of your first year curriculum choice. College credit available.

ProStart® Independent Study-- A self-study of the industry-recognized ProStart® curriculum, developed by the National Restaurant Association Educational Foundation. It's an opportunity to learn, intern, compete, earn scholarships, and network with industry leaders.



HUMAN SERVICES

Cosmetology

Credit: 1.5 (semester)
3.0 (Annual)

Grade Offered: 11, 12

Annual TC9200
Fall TC9201
Spring TC9202

Prerequisite: Recommended - 1 semester of any Art course; Fashion and Interior Design; and/or 1 semester of Psychology

TCD operates a state licensed School of Cosmetology. Upon successful completion of 1500 clock hours of work and passing TCD's practical exam, a student qualifies to take the state license examination. This rigorous curriculum includes haircutting, styling, coloring, permanents, nail technology, esthetics, and the application of cosmetics, as well as anatomy/physiology; skin, scalp, and nail diseases; and understanding chemical processes. Curriculum includes haircutting, styling, coloring, permanents, nail technology, esthetics, and the application of cosmetics. Application of these skills is accomplished through TCD's "Salon 301" (open to the public), internships, and other program-sponsored activities. It is possible to earn up to 46 hours of dual credit through College of DuPage, leaving only the completion of general education requirements to obtain an associate's degree after

Prepares you for a license exam. Earns college credit.

INFORMATION TECHNOLOGY

Computer Information Systems & Game Design

Credit: 1.5 (semester)
3.0 (Annual)

Grade Offered: 11, 12

Annual TC9040
Fall TC9041
Spring TC9042

Prerequisite: 1 semester of keyboarding

Whether gaming or software is your passion, pump up your skills in design, development, and debugging. Game programming and web development require creative, detail-oriented people. Design your own games, websites, or apps as you develop skills in writing code, storyboarding, and 3D character development. Use state of the art design software and today's programming languages: Unity, Java, HTML, 3D Studio Max, Visual Studio (Visual Basic and C#), GameMaker, and Adobe Photoshop. Acquire new skills in managing, running, trouble-shooting, and maintaining systems in any setting. College credit available.

LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY

Criminal Justice

Credit: 1.5 (Semester)
3.0 (Annual)

Grade Offered: 11, 12

Annual TC9070
Fall TC9071
Spring TC9072

Prerequisite: None

This program lays the foundation for students interested in pursuing a career in law enforcement, criminal law, corrections, homeland security, investigative services, forensics, and related public safety career pathways. Cover the basics of traffic law/traffic enforcement; juvenile and criminal law; crime prevention; the court and corrections systems; and more. Develop your observational, communication, documentation, and "people" skills critical for success in this field. You will also learn which career paths require further training or education. The program includes simulations, demonstrations, report preparation, lectures, field trips and work-based learning experiences. Viewing the criminal justice system from the ground up will help you understand how these career pathways play out at the local, private, state, and federal levels of service. Students will also receive Citizens Emergency Response Training (and possible certification) through the Addison Police Department. 1 hour of dual credit is available through College of DuPage. Earns college credit.

Fire Science

Credit: 1.5 (Semester)
3.0 (Annual)
Grade Offered: 11,12
Annual TC9260
Fall TC9261
Spring TC9262

Prerequisite: Earned credits for junior standing

This program follows the standards of training in NFPA 1001 (National Fire Protection Association) Standard for Firefighters and National Standards. After age 18, you will be on the road to future Basic Operations Firefighter Certification at age 21.



Emergency Medical Technician

Credit: 1.5 (Semester) Level: III

3.0 (Annual)
Grade Offered: 11,12
Annual TC9270
Fall TC9271

Spring TC9272

Prerequisite: Earned credits for junior standing

These programs follows the standards of training in NFPA 1001 (National Fire Protection Association) Standard for Firefighters, and Emergency Medical Technician (EMT) National Standards. After age 18, you could become an EMT -- and be on the road to future Firefighter Basic certification, after age 21. Students must select either Fire Science or EMT.

The Fire Science program includes safety and hazardous materials recognition; fire behavior; rescue/extrication techniques (including use of the "jaws of life"); communications; and equipment use and maintenance. Emergency medical training includes Emergency Medical Responder (EMR), Emergency Medical Technician (EMT), and Healthcare Provider CPR. You must meet the necessary age (at least 18 years old), state, and industry requirements in order to challenge the state or national EMT licensing exam. Visit the Fire Science page at www.tcdupage.org for more detailed EMT exam requirements. 22 hours of dual credit is available through College of DuPage. Prepares you for a certification exam. Earns college credit.

MANUFACTURING

Manufacturing, CNC & Machine Technology

Credit: 1.5 (Semester) Level: III

3.0 (Annual)
Grade Offered: 11, 12

Annual TC9140
Fall TC9141
Spring TC9142

Prerequisite: None

Discover how 2D modeling software like Revit, Auto-CAD (computer aided design), Inventor, or Adobe fuels creativity and innovation in fields as diverse as architecture, construction, manufacturing, civil engineering, biomedical technology and more. The precision engineering field can include precision controls, replication, and fabrication; optics and optical fabrication; nanotechnology; metrology (measurement); interferometry (electromagnetic wave technology); and materials processing. It sounds futuristic, because it is!

If your passion is ultra-precision production, discover how CAD interfaces with CAM (computer aided manufacturing) software tools and robotic production systems. Use 3D parametric solid part modeling software and create prototypes with TCD's 3D printers. You will learn how to control sophisticated Computer Numerically

Controlled (CNC) machines and how to program and operate CNC machining and turning centers. Whether you pursue an apprenticeship or a degree after high school, you will have the skills to succeed in a high-tech field with broad applications and opportunities.

Welding Technology

Credit: 1.5 (Semester)
3.0 (Annual)

Grade Offered: 11, 12

Annual TC9880
Fall TC9881
Spring TC9882

Prerequisite: None

Experience the variety of custom and production welding techniques, including the four major processes: stick arc, MIG, TIG, and oxyacetylene. Discover how all these are utilized in welding, cutting, and brazing. Learn to read blueprints and understand welding symbols. Develop and practice industry life skills including estimate preparation, shop expansion, time management, industrial mathematics, and communication skills. Advanced students will identify metal shapes, practice accurate measuring techniques, and recognize different welding test positions. Earns college credit.

ROBOTICS & AUTOMATION TECHNOLOGY

Are you ready to be prepared to enter the industrial and manufacturing workplace with the knowledge and skill levels surrounding; programmable controllers, process control instrumentation and mechanical maintenance? Courses will provide students the basic principles for Alternating current (AC) and Direct Current (DC) motors and generators. The hydraulic and pneumatic course focuses on pumps, motors, cylinders, boosters, valves, etc. tor transmit and control power. Students will additionally learn basic theory and operation of robots in industrial automation.

If you are fascinated by today's ever-morphing electronic devices, imagine learning how they work – and how they can be improved by YOU. Learn to install, customize, repair and maintain today's cutting edge electronics technology. Projects you can tackle include designing and building a 14 watt RMS stereo amplified system, configuring PC networks, exploring alternative energy generation (solar and wind), and using motor controls, PLCs and robotics to design your mini-automated system. College credit available.

TRANSPORTATION & LOGISTICS

Auto Body Repair & Refinishing

Credit: 1.5 (Semester) Level: III

3.0 (Annual)

Grade Offered: 11, 12 Annual TC9160

Fall TC9161

Spring TC9162

Prerequisite: None

The program teaches all facets of collision repair, including basic sheet metal and welding techniques. Other areas include body alignment equipment; finishing and painting; cost/time estimating; plastics; fiberglass; measuring systems; and shop management. Students have the opportunity earn Gold Class points toward I-CAR certifications. 12 hours of dual credit through Kishwaukee Community College; Articulated credit is available through Highland College and Nashville Auto-Diesel.

Automotive Technology

Credit: 1.5 (Semester) Level: III

3.0 (Annual)

Grade Offered: 11, 12 Annual TC9170

Fall TC9171 Spring TC9172

Prerequisite: A or B in Auto Mechanics

ASE-certified instructors help you build fundamental and advanced skills in computerized engine controls; engine tune-up and lubrication; brakes; electrical, fuel, cooling, and exhaust systems; and wheels, steering, and alignment. Second year students develop skills in diagnostics transmissions, and engine building. You can test for ASE certification in air conditioning and earn 8 hours of dual college credit through College of DuPage or articulated college credit is available through several colleges and technical schools. Earns college credit.



	DUAL CREDIT			
TCD PROGRAM	COD PROGRAM NO	O. OF HOURS	TERM	
Automotive Technology	Auto 1040	3	Spring	
	Auto 1110 (2nd Year)	3	Spring	
	Auto Tech 1140 (2nd Year)	3	Spring	
Computer Info Systems	CIS 1400	4	Spring	
& Game Design	CIS 1211	3	Fall	
	CIS 2212	3	Spring	
Construction	ARCH 1141 - Construction Method	ls I 2	Spring	
Cosmetology	Cosme 1101	3	Fall	
	Cosme 1103	3	Fall	
	Cosme 1105	3	Fall	
	Cosme 1107	3	Fall	
	Cosme 1111	3	Spring	
	Cosme 1113	3	Spring	
	Cosme 1115	2	Spring	
	Cosme 1117	3	Spring	
	Cosme 2201	3	Fall	
	Cosme 2203	3	Fall	
	Cosme 2205	3	Fall	
	Cosme 2207	2 3	Fall	
	Cosme 2221 Cosme 2223	3	Spring	
	Cosme 2225	3	Spring Spring	
	Cosme 2227	2	Spring	
	Cosme 2250	3	Summer	
	Cosme 2253	2	Spring	
Criminal Justice	CRIMJ 1100 - Intro to CJ	2	Fall	
	CRIMJ 1100 - Intro to C) CRIMJ 1110 - Police & Society	3 3		
	CRIM) 1110 - Folice & Society		Spring	
Early Childhood Education	ECEC 1100 - Intro to Early Childho	od 3	Spring	
	PHYS 2253 - CPR	1	Fall	
Electronics/Digital Electronics	ET 1100 - Electricity & Electronics	3	Spring	
	ET 1110 - Intro to Technology	2	Spring	
	(EDD students only) ELECT 1141 - Digital Fundamentals	s 3	Fall	
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Fire Science	Fire 1110 - Intro to Fire Science	3	Fall	
	Fire 1150 - CPR	1	Fall/Spring	
	Fire 2283 - First Responder	3	Spring	
	FIRE 2221 - Tactics	3	Spring	
Emergency Medical Technician	Fire 2271 - EMT Basic	10	Spring	
·	Fire 1150 - CPR Training	1	Fall	
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	DUAL CREDIT			
TCD PROGRAM	COD PROGRAM	NO. OF HOURS	TERM	
HVAC	Airc 1105 - Intro to Safety, Materials & Equipment Airc 1108 - Refrigerant Certification	3 1	Spring Spring	
Medical / Health	HS 1100 - Survey of Health Careers HS 1110 - Biomedical Terminology	2 4	Spring Spring	
Multimedia	MPT 1011 - Intro to Motion Picture/TV MPT 1020 - Editing Motion Picture/TV MPT 1220 - Intro to TV Production		Fall/Spring Spring Spring	
Nursing Assistant Training Program	NURSA 1105 - Basic NA Training	7	Spring	
Pro-CBS (Culinary)	CULIN 1120 - Foodservice Sanitation	2	Fall	
Welding	WELD 1100 - Welding 1	3	Spring	

