

CAREER AND TECHNICAL EDUCATION TEACHER MANUAL



College and
Career Readiness
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SLPS Vision

St. Louis Public Schools is the district of choice for families in the St. Louis region that provides a world-class education and is nationally recognized as a leader in student achievement and teacher quality.

Mission

We will provide a quality education for all students and enable them to realize their full intellectual potential.

Core Beliefs

- All children can learn, regardless of their socioeconomic status, race, or gender
- The African American Achievement Gap can be eliminated
- Parents must be included in the education process
- Competent, caring, properly supported teachers are essential to student learning
- The community must be involved in encouraging high achievement for all children
- The St. Louis Public Schools are obligated to help students overcome any obstacles that may hinder their learning by forming partnerships with the entire community

Transformation Plan Goals

3.3 By 2020, 90% of our students will be prepared for the college and/or career of their choice upon graduation from high school.

For CTE Resources and Information Visit
www.slps.org/CCR

Introduction

Welcome to the Division of Career and Technical Education within the St. Louis Public Schools. As a high school classroom teacher you will guide the lives of young adults to be career and college ready. You will prepare them to be productive employees in the 21st century workforce.

This handbook has been written to guide you through the many responsibilities that you have as a teacher. Due to increased federal and state accountability, the demands on the Career and Technical Education (CTE) teacher have greatly increased. This handbook should help make some of the day-to-day tasks easier as you instruct the students at your respective schools. While different high schools might do some things differently; overall, the basic information in this handbook applies to all new and veteran CTE teachers.

The resources for your classrooms will come from several places – the high school you are assigned to, the Central Office CTE Staff, and your Program Advisory Committee.

Why is CTE Important?

Career and Technical Education strengthens our students, economy, state, and nation. Nearly two-thirds (59%) of all Missouri jobs will require some postsecondary training by 2018. Good CTE programs attract and retain industry jobs that might go elsewhere if Missouri's workforce is not qualified to fill the positions. The CTE programs educate students of all ages for existing jobs, and for future job replacement as the workforce ages and retires.

CTE students of today are Missouri's workforce of tomorrow. Programs focus on high-demand, high-wage occupations. "College-ready" and "career-ready" are no longer two separate tracks. Students pursuing non-degree postsecondary education still need college-ready academic skills. CTE programs provide a viable pathway to postsecondary or industry-recognized certification and workforce success. Students need to develop critical thinking and communication skills, know how to synthesize information and be confident enough individually to work on a team.

CTE's rigorous education and skills training are a critical link to student development. Nationally, CTE programs boost high school and college-going graduation rates. Nearly 90% of CTE students go on to college or have employment upon completion of the program. In addition, the Career & Technical Student Organizations (CTSOs) are an important part of the curriculum as they help with building leadership skills.

OVERVIEW OF CAREER AND TECHNICAL EDUCATION

The Career and Technical Education Department is funded by the federal Carl D. Perkins Career and Technical Education Act and monies are distributed by individual states. There are a number of stipulations for this funding, both to continue existing programs and to receive additional funding for new programs. It will be important to know how your particular program is funded, what funds are available to you, and when, during each course of study, how to properly document and account for funding spent.

The ultimate goal of the CTE program is to prepare students for the workforce. Hopefully, every student who graduates from the program will have a certification of some kind. It is the teacher's job to facilitate this vision.

Career and Technical Education teachers may or may not have a teaching background, but all must have a background in the field in which they are teaching. The CTE program is usually the last 2 years of the student's high school education. During the last semester of the student's senior year, they will typically engage in an internship program. The idea of the internship is to let the student get a feel for the career he or she has chosen, and assist them to ascertain their level of career readiness. Internships are awarded high school credit and are not for pay.

The curriculum (texts, etc.) is provided by the Central Office, but teachers are mandated to have an advisory committee of ten to twelve people that assist in guiding and supporting the teacher during the program. One of the many examples of what an advisory committee might do is help locate internships for the students. Each school's program assembles its own advisory committee (usually with help from the Central Office) with an eye towards building a cooperative and helpful support structure to optimize both the teaching and learning experiences. The Central Office has Specialists to facilitate the advisory committee selection process.

As a CTE teacher, you should encourage student participation in organizations that are related to the field of study. This includes everything from having field experiences, participating in student organizations, and taking advantage of dual-credit, dual enrollment, and articulation opportunities for college credit. With the help of your advisory committee, each student's Personal Plan of Study (4 year sequence of high school courses to meet graduation requirements) will ideally both challenge the student and cultivate his/her skills with an eye towards preparing a career-ready individual.

At the completion of the program, each student will need to take a Technical Skills Assessment (TSA) in order to determine his or her readiness to exit the program. There are many different TSAs available, but only some are recognized by the program. Be sure to consult the list of approved TSAs before administering them to students. Central Office Staff will guide this phase of the CTE instruction.

Once a student has exited the program, there is a mandatory 90 and 180 day follow up to determine what students do after high school graduation. The teachers can assist with this task because of the relationship of trust that has been built with the student.

CAREER & TECHNICAL EDUCATION TEACHER CHECKLIST

(Effective August, 2012)

With federal and state accountability ever more present for both CTE and for school districts in general, the expectations of CTE teachers need to be standardized across our St. Louis Public School District high schools. It is unfair to have expectations for CTE teachers be uneven from school to school. We believe we enrich what our talented CTE teachers have to offer by standardizing the expectations for everyone. **To provide guidance, listed below are the mandatory expectations of every District CTE teacher.** Principals will be asked to include these in every teacher's evaluation at the end of the school year.

CLASSROOM:

- Teacher must have a copy of the District approved curriculum, textbooks, and potential accompanying materials for the course(s), have them visible when teaching and copies available for when there may be a substitute in the classroom.
- Teachers should have available the appropriate tools, equipment and supplies needed for teaching. If not, they should work with their principal and CTE Specialist to secure what is needed. Is current technology being used in the classroom?
- Teachers should include the CTSO leadership and other information within the classroom teaching.
- Teachers should provide a field experience related to the CTE program at least once a year.
- Teachers should ensure the classroom is neat and uncluttered so as to model a good, clean work environment.

CLASSROOM MANAGEMENT:

- Teacher should exhibit control of the classroom learning environment.
- Teacher should be able to teach all students regardless of their level of comprehension and, if they cannot, should seek assistance in doing so. Literacy for all is stressed.

RECORD KEEPING:

- Teachers should have copies of all requisitions and purchase orders.
- Teachers should have copies of all articulation agreements or dual credit agreements.
- Teachers should have a current copy of the supply and equipment inventory.
- Teachers should have all supplies/materials/lab items secured.
- At the close of the year, teachers should have a list of what inventory is secured and locked up for the summer with a copy in the principal's office and CTE office.
- Teachers should have records of student involvement in Career and Technical Student Organizations.
- Teachers should have copies of all marketing and promotional items for their program.
- Teachers should have copies of the 90 and 180-day follow up information on students.

Technical Skills Attainment (TSAs) and Industry Recognized Credentials (IRCs):

- Teachers should have a copy of the previous year's TSA/IRC scores and records.
- Teachers should have resumes of the TSA/IRC proctors at least 2 weeks in advance of the TSA/IRC test with a copy given to the CTE Central Office at the same time.
- Teachers should work at securing pre-tests whenever possible.

ADVISORY COMMITTEE:

- Teachers should have identified a qualified and appropriate advisory committee based on the guidelines in the SLPS Advisory Handbook no later than the 2nd Friday in September.
- Teachers should submit a current advisory committee list to the CTE Specialist by October 1st.
- Teachers should ensure the Advisory Committee chair is a business or college person.
- Teachers should ensure the Advisory Committee meets a minimum of twice/year. Ideal timing is one meeting per Semester-Fall and Spring.
- Teacher must distribute copies of the meeting minutes no later than weeks after the meeting to all Committee members, the school principal, and the CTE Specialist.
- Teachers must retain advisory committee minutes, agendas and sign-in sheets for record keeping. An additional copy of these items must be forwarded to the CTE Specialist.
- Teachers should have a plan for Advisory Committee involvement with the CTE program students.
- Teachers should utilize the Advisory Committee Handbook and should ensure the principal has a copy.

SENIOR INTERNSHIPS:

- Teachers should have records of all internship assignments and of where internships were sought.
- Teachers should have a log of their internship site visits.
- Teachers should have all records of the internship site evaluations based on individual internship plans.
- Teachers should make use the District Internship Handbook and should ensure the principal has a copy.

TEACHER CERTIFICATION:

- Teachers should be aware of the status of their respective certifications and should have certification papers available.
- Teachers should have copies of programs or participation verification for all professional development.

SAMPLE CTE PLANNING CALENDAR

Note: If you are also teaching non-CTE courses, incorporate their deadlines into your calendar!

August

- Set up email and SIS grade book
- Begin 1st and 2nd year Mentor/ Mentee Program
- Attend District, CTE, and School Professional Development
- Establish Classroom Management Plan
- Develop Class Syllabus and Instructional Calendar
- 2nd Friday of the month-send class syllabus and planning periods to CTE Specialist**
- Complete and Submit Independent Professional Development Plan
- Obtain and review student IEP's
- Market your program to students, educators, and the community

September

- St Louis Community College-Dual Credit Enrollment Deadline-2nd week of September
- Establish/ Contact Advisory Committee Members
- Begin Contacting Internship Sites
- Hold first CTSO meeting/ Plan CTSO calendar for the year
- 2nd Friday of the month-Advisory Committee Roster due to CTE Specialist**
- Market your program to students, educators, and the community

October

- St Louis Community College-Articulation Agreement Deadline-1st week of October
- Conduct first Advisory Committee Meeting
- Begin completing appropriate internship documentation
- Market your program to students, educators, and the community

November

- Continue completing internship documentation
- 2nd Friday of the month-Deadline for requisitions (purchases) over \$1,000 and computer purchases due to CTE Specialist.**
- Begin Preparing Final Exams
- Market your program to students, educators, and the community

December

- Finalize all internship documentation
- 2nd Friday of the month-Internship Placements due to CTE Specialist**
- Enter and keep record of semester 1 grades
- Administer Final Exams and turn in grades
- Market your program to students, educators, and the community

January

- Internship documentation should be completed
- Review Internship guidelines with Senior interns
- Supervise Senior interns
- Market your program to students, educators, and the community

February

- Supervise Senior interns
- Host an event for CTE month
- Select date for second Advisory Committee Meeting
- Prepare for CTSO competitions and state conventions
- Market your program to students, educators, and the community

March

- Supervise senior interns
- Conduct Second Advisory Committee Meeting
- Spring Break
- Market your program to students, educators, and the community

April

- Conduct Final Evaluations and Assessments for senior interns
- Survey internship sites regarding future internship possibilities
- Administer Technical Skills Assessment to completer students
- Market your program to students, educators, and the community

May

- Prepare final exams
- Finalize end of year business
- May 15th-End of Year Inventory list due to CTE Specialist***
- Clean classroom and laboratories
- Store valuable equipment
- Register for MOACTE Conference
- Enter and keep record of 2nd Semester grades
- Conduct exit interviews with graduating seniors
- Market your program to students, educators, and the community
- Submit Dual Credit and Articulation Agreement Grades-3rd week of May

GLOSSARY OF TERMS

ACADEMIC PROGRAM/ CLASSES– Traditional basic education subjects such as English, math, science and social studies.

ADVISORY COMMITTEE– A selected group of individuals representing parents, students, various sectors of business, industry and college who provide human, technical and financial resource assistance in a specific high school CTE program.

ALL ASPECTS OF AN INDUSTRY– With respect to a particular industry, the planning, management, finances, technical and production skills, labor and community issues, health and safety, and environmental issues related to that industry. The individual has a comprehensive understanding and strong experience in the industry he/she is preparing to enter.

APPLIED ACADEMICS– Academic subjects such as math, science and English taught by demonstrating how each subject is used in a real-life situation or job performance.

APPROVED SECONDARY CAREER AND TECHNICAL EDUCATION PROGRAM– A program that has been approved by the Missouri Department of Education in accordance with applicable State Board of Education regulations governing career and technical education.

AREA VOCATIONAL-TECHNICAL SCHOOL (AVTS)– A public school which provides career and technical education to secondary school students, out-of-school youth and adults in a geographical area comprised of and operated by one or more school districts. Clyde C. Miller is the area AVTS for St. Louis Public Schools.

ARTICULATION AGREEMENT– A planned sequence of courses designed by both the high school and college to meet requirements towards a certificate, diploma or degree in a specialized field. The articulation agreement is recognized only at that college or university.

CAREER ACADEMY– A smaller learning community within a high school that has a career and college theme. An academy has a cohort group of students and teachers, a rigorous sequential curriculum, experiential components and a Business Advisory Committee which provides guidance in the career/college theme. Students are exposed to career and technical training and the ideal career academy prepares and qualifies students for both postsecondary admission and for work.

CAREER PATHWAY- A strand of courses, similar to a CTE program that provides students with information on a particular career or college area. There is not necessarily a sequential set of courses that would lead to a certification or specific skill set.

COLLEGE AND CAREER READINESS– The department of the Missouri Department of Education responsible for administering career and technical education programs in the state.

CTE PROGRAM– A prescribed sequence of courses in the same career pathway that leads to a student being a program completer. The CTE program may offer a certification and/or college articulated or dual credit.

CTSOs (CAREER AND TECHNICAL STUDENT ORGANIZATIONS)– Required profession-related organizations that provide unique opportunities for career and leadership development, motivation and recognition. Organizations have local, state and national affiliations and organizational fees are covered by student fund raising activities:

DECA:	Association of Marketing Students
FBLA:	Future Business Leaders of America
FCCLA:	Family, Career and Community Leaders of America
NFFA:	National FFA
HOSA:	HOSA Future Health Professionals (name changed in 2016)
SkillsUSA:	Trade and Industrial Students of America

CARL D. PERKINS VOCATIONAL AND TECHNICAL EDUCATION ACT (P.L. 101-392) – Federal legislation reauthorized in 2006 to provide funding for career and technical education programs nationally.

CERTIFICATIONS- Industry verification that there has been mastery in a particular area related to the industry. Generally, there is a fee to sit for the exam.

CERTIFIED TEACHER/ INSTRUCTOR– A professional who has successfully completed all the Missouri Department of Education requirements to qualify as a classroom teacher for a given subject or program.

COMPLETER– A student who (1) has completed all program requirements and has met the performance standards in the approved career and technical program according to the Missouri Secondary Career and Technical Education Program Approval and (2) has graduated.

COMPLETION RATE– A measure of the percentage of students who were enrolled in CTE programs at 11th grade or above who completed all program requirements and received diplomas in the year in which they were scheduled to graduate.

CONCENTRATOR– A student who has earned 3 or more sequential credits in any state-approved CTE program. Sequential credits can consist of courses that crossover into different program areas. It is a local decision to determine the sequence; therefore, it is a local decision to determine when a student becomes a concentrator and completes a CTE program.

CORE PERFORMANCE STANDARDS AND MEASURES– Required by the Perkins Act, each state must implement a system of data collection and reporting to identify student learning and competency gains, achievement of basic, academic and occupational skills, retention in school, placement after graduation and incentives for targeted groups.

DESE (DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION)-The Missouri Department of Education or DESE encompasses all of the public schools in the state. DESE is the administrative department of the State Board of Education. The department’s website provides a wide range of information from the Technical Skills Assessment test, information for Professional Development and teacher’s certification, and curriculum information. Visit www.dese.mo.gov for more information.

DUAL CREDIT– A college course in which a student earns both high school and college credit simultaneously. Usually, there is a college fee for a dual credit course and the credit is good at any college or university.

DUAL ENROLLMENT– A college course in which a high school student earns college credit via on campus or online course work.

INDUSTRY RECOGNIZED CREDENTIALS (IRC)- High-quality credentials recognized by multiple employers across an industry.

INTEGRATION OF ACADEMIC AND CTE- The process of blending academic curriculum content with career and technical education.

IEP (INDIVIDUAL EDUCATION PLAN)- A prescribed learning plan for students who need accommodations with their education resulting from a learning disability, a behavioral disorder, or a physical impairment. The guidance counselor can be a resource.

INTERNSHIPS – Work experience for high school credit provided to seniors during the second semester or their CTE program. The CTE teacher is instrumental in planning and implementing this activity for their students who are supervised by an on-site trainer and the classroom teacher.

LOCAL EDUCATION AGENCY (LEA)– A school district having administrative control of public education within a given locale.

MOSIS (Missouri Student Information System)– A data collection system used to track public high school students. For CTE, this system provides the information on numbers of CTE courses offered and follow up data on high school graduates. This information determines 2 of the 14 MSIP points required for a school district’s accreditation.

NATIONAL SKILLS STANDARDS– Under the auspices of federal legislation, a voluntary set of standards for occupational competencies, developed by or with the cooperation of business and industry, establishing a benchmark for skills needed for successful employment in a particular industry.

PERSONAL PLAN OF STUDY– The 4-year high school student’s schedule of classes which meet all graduation requirements and meet the sequence of CTE courses that are in the student’s chosen career pathway.

PLTW (PROJECT LEAD THE WAY)– A CTE program that provides rigorous and innovative science, technology, engineering, and math education curriculum used in middle and high schools across the U.S. PLTW engineering programs are at Gateway, and PLTW bio-medical programs are at Carnahan, Collegiate School of Medicine and Bioscience and Soldan. www.pltw.org

PORTFOLIOS– for CTE students to organize a record of their skills, certificates, accomplishments, grades/test scores, talents, etc. that they have acquired throughout high school. Missouri Connections is used in all high schools and is an electronic portfolio program. It is administered by Guidance Counselors and or CTE teachers.

PROFESSIONAL CTE TEACHER ORGANIZATIONS–ACTE (Association of Career and Technical Education) is the national CTE organization for teachers, school administrators, and businesspersons; MOACTE is the state CTE organization.

PDU (PROFESSIONAL DEVELOPMENT UNITS)– Opportunities to enhance education. These can be pursued individually or through activities and opportunities provided by the District. It is important to keep copies of certificates received at Professional Development sessions.

POS (PROGRAM OF STUDY)- The Carl D. Perkins Career and Technical Education Act of 2006 requires the development and implementation of a programs of study for each CTE program. This includes the pre-requisites for the program, the sequence of courses, certifications and post-secondary opportunities after high school graduation.

SIS (STUDENT INFORMATION SYSTEM)– computer system used by the St. Louis Public Schools for teachers to report attendance and classroom grades.

STEM (SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS)– A national education coalition to improve education at all levels in science, technology, engineering, and mathematics. This organization is working at national, state, and local levels to ensure the U.S. remains the economic and technological leader of the 21st century global marketplace. Gateway High School will focus on this initiative. www.stemcareer.com

TSA (TECHNICAL SKILLS ASSESSMENT)- The federal Perkins Act of 2006 requires a TSA to measure the percentage of CTE concentrators who pass a skill assessment aligned with industry-recognized standards. TSA's may be performance based assessments or multiple choice questions as determined by the state, CTE office, and classroom teacher. A TSA is intended to be taken after a student completes a program.

CAREER CLUSTERS

The Career Clusters were developed by the National Association of State Directors of the Career and Technical Education Consortium. The National Career Clusters™ Framework provides a vital structure for organizing and delivering quality CTE programs through learning and comprehensive programs of study (POS). In total, there are 16 Career Clusters in the National Career Clusters™ Framework, representing more than 79 Career Pathways to help students navigate their way to greater success in college and career.

Each Career Cluster represents a distinct grouping of occupations and industries based on the knowledge and skills they require. The 16 Career Clusters were developed as follows:

- **Agriculture, Food & Natural Resources** -*The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.*
- **Architecture & Construction** – *Careers in designing, planning, managing, building and maintaining the built environment.*
- **Arts, Audio/Video Technology & Communications**-*Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.*
- **Business Management & Administration**-*Careers in planning, organizing, directing and evaluating business functions essential to efficient and productive business operations.*
- **Education & Training**-*Planning, managing and providing education and training services, and related learning support services such as administration, teaching/training, administrative support, and professional support services.*
- **Finance**-*Planning and related services for financial and investment planning, banking, insurance, and business financial management.*
- **Government & Public Administration**-*Planning and executing government functions at the local, state and federal levels, including governance, national security, foreign service, planning, revenue and taxation, and regulations.*
- **Health Science**-*Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.*
- **Hospitality & Tourism**-*Preparing individuals for employment in career pathways that relate to families and human needs such as restaurant and food/beverage services, lodging, travel and tourism, recreation, amusement and attractions.*
- **Human Services**-*Preparing individuals for employment in career pathways that relate to families and human needs such as counseling and mental health services, family and community services, personal care, and consumer services.*
- **Information Technology**-*Building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support and management of hardware, software, multimedia, and systems integration services.*
- **Law, Public Safety, Corrections & Security** -*Planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services.*
- **Manufacturing**-*Planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering.*
- **Marketing**-*Planning, managing, and performing marketing activities to reach organizational objectives such as brand management, professional sales, merchandising, marketing communications and market research.*

- **Science, Technology, Engineering & Mathematics**-*Planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services.*
- **Transportation, Distribution & Logistics**-*The planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.*

Information from www.careertech.org – Career Clusters at a Glance

FIND YOUR FUTURE IN CAREER PATHS & CAREER CLUSTERS

Manufacturing

Production
Manufacturing Production
Process Development
Maintenance, Installation
and Repair
Quality Assurance
Logistics and Inventory Control
Health, Safety and Environmental
Assurance

**Science, Technology,
Engineering and
Mathematics**

Engineering and Technology
Science and Math

**Transportation,
Distribution and Logistics**

Transportation Operations
Logistics, Planning and Management Services
Warehousing and Distribution Center Operations
Facility and Mobile Equipment Maintenance
Transportation Systems and Infrastructure
Planning, Management and Regulation
Health, Safety and Environmental
Management
Sales and Services

**Architecture and
Construction**

Design and Pre-Construction
Construction
Maintenance and Operations

Human Services

Early Childhood Development and Services
Counseling and Mental Health Services
Family and Community Services
Personal Care Services
Consumer Services

Hospitality and Tourism

Restaurants and Food and
Beverage Services
Recreation, Amusement
and Attractions
Travel and Tourism
Lodging

**Government and
Public Administration**

Public Management and Administration
Governance
National Security
Foreign Service
Planning
Revenue and Taxation
Regulation

**Law, Public Safety,
Corrections and Security**

Correction Services
Emergency and Fire Management Services
Security and Protective Services
Law Enforcement Services
Legal Services

Education and Training

Administration and
Administrative Support
Professional Support Services
Teaching and Training

Health Science

Biotechnology Research
and Development
Therapeutic Services
Diagnostics Services
Health Informatics
Support Services

**Industrial &
Engineering
Technology**

Building &
Fixing Path

Human Services

Helping Path

Health Services

Health Path

**Essential
Knowledge & Skills**

Academic Foundations
Ethics & Legal Responsibilities
Systems Leadership & Teamwork
Informational Technology Applications
Employability & Career Development
Problem Solving & Critical Thinking
Safety, Health & Environmental
Communications
Technical Skills

**Natural Resources
Agriculture**

Nature Path

**Arts &
Communication**

Creative Path

**Business,
Management &
Technology**

Business Path

**Agriculture, Food and
Natural Resources**

Food Products and
Processing Systems
Plant Systems
Animal Systems
Power, Structural and
Technical Systems
Natural Resources and
Environmental Systems
Agribusiness Systems

**Arts, A/V Technology
and Communications**

Audio and Video Technology and Film
Printing Technology
Visual Arts
Performing Arts
Journalism and Broadcasting
Telecommunications

Finance

Accounting
Insurance
Banking Services
Business Finance
Securities and Investments

Information Technology

Network Systems
Information Support and Services
Web and Digital Communications
Programming and Software Development

Marketing

Marketing Management
Marketing Communications
Marketing Research
Professional Sales
Merchandising

**Business Management
and Administration**

General Management
Human Resources Management
Business Information Management
Administrative Support
Operations Management



**Missouri
Career Education**
ESSENTIAL SKILLS FOR ALL STUDENTS

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LIST OF ST. LOUIS PUBLIC HIGH SCHOOLS/CTE PROGRAMS

Beaumont Technical High School

- Respiratory Therapy
- Cosmetology
- Culinary Arts
- Health Occupations-Certified Nursing Assistant (CNA)
- Construction Trades

Carnahan School of the Future

- TV Production
- Project Lead the Way (Biomedical Science)
- Business-Advanced Microsoft Applications

Central Visual and Performing Arts

- Multimedia Technology

Collegiate School of Medicine and Bioscience

- Project Lead the Way (Biomedical Science)

Clyde C. Miller Career Academy

- Health Occupations-Certified Nursing Assistant (CNA)
- Health Informatics
- Rehabilitation Therapy
- Hospitality and Tourism
- Culinary Arts
- Computer Connectivity
- Multimedia Technology
- Precision Machining Technology (CIM)
- Business Management and Administration
- Database Management
- Electricity/ Electronics

Gateway STEM High School

- Emergency Medical Services (EMT)
- Firefighting
- Health Sciences (Direct Patient Care)
- Health Occupations-Certified Nursing Assistant (CNA)
- Rehabilitation Therapy
- Aviation

- Project Lead the Way (Engineering)
- Business Management and Administration
- Business-Advanced Microsoft Applications
- Marketing
- Accounting
- Veterinary Science
- Robotics

McKinley Classical Leadership Academy

- Business-Advanced Microsoft Applications
- Robotics

Metro Academic and Classical High School

- Computer Science

Northwest Academy of Law

- Law

Roosevelt High School

- Early Childhood Education
- Construction Trades
- TV Production
- Business-Advanced Microsoft Applications
- Marketing

Soldan International Studies High School

- International Marketing
- Business-Advanced Microsoft Applications
- Project Lead the Way (Biomedical Science)
- Business Management and Administration

Sumner High School

- Business-Advanced Microsoft Applications
- Multimedia Technology

Vashon High School

- Business-Advanced Microsoft Applications
- Accounting

Northwest Academy of Law

- Law

NOTE: Business courses offered district – wide at all high school locations.

CTE Additional Offerings

- *Dual Enrollment Programs (Ranken Technical College)*
- *Dual Credit Programs (St. Louis Community College and State Technical College)*
- *Pre-Kindergarten-8th Grade Career Programs and Classroom Resources*

PERKINS – COMPLIANCE

Carl D. Perkins Career and Technical Education Act is the federal legislation reauthorized in 2006 to provide funding for career and technical education programs nationally. The basic goal of the act is to provide “an increased focus on academic achievement, strengthen connection between secondary and postsecondary education, and improve state and local accountability” (dese.mo.gov).

In order to receive this funding, the programs must meet certain criteria. These include:

- The money must go toward *improving* CTE and student achievement (not just maintaining current operations). For example, improving performance measures with teachers.
- Missouri CTE and general academic education must be integrated more fully – including, but not limited to improving the academic content of existing CTE courses.
- Missouri CTE must continue to emphasize the comprehensive guidance program as part of the school-counseling program at all levels of education.
- Both secondary and postsecondary are required to demonstrate alignment of courses for seamless transition between secondary and postsecondary career education programs of study.
- Programs of study must prepare students for high-demand, high-wage occupations that lead to recognized employer credentials, postsecondary certificates, and associates and/or bachelor’s degrees.

The CTE Central Office is awarded an annual Perkins budget from DESE. The Central Office staff, along with Advisory Committee recommendations, will guide teachers as to what can be approved expenditures for their respective CTE programs. When purchases are submitted on requisition forms, it is important for teachers to keep track of how their Perkins budget is spent, keep copies of requisitions for equipment/supplies, inventory, etc., and notify the CTE Central Office staff when purchased items have been delivered. A sample requisition form can be found on page 32. There are preferred vendors to use for all purchases. Central Office staff can assist you with a list. Please go to DESE to retrieve an inventory spreadsheet. <http://dese.mo.gov/financial-admin-services/career-education-finance/perkins-iv-finance>

Equipment

Equipment is defined as tangible personal property having a useful life of more than one year and an acquisition cost of \$1,000 or more per unit.

Equipment items must meet the following requirements:

- Have an instructional use
- Improve the career and technical education program
- Strengthen and support academic and technical skill achievement

The following items are subject to the inventory management and control requirements:

Equipment items with an acquisition cost of \$1,000 or more per unit

Items with an acquisition cost under \$1,000 per unit which are considered attractive or easily pilfered:

- Audio-visual equipment
- Digital cameras
- Laptops
- Television sets
- DVD players
- iPads
- Cell phones
- Power tools
- Computers

TEACHER CERTIFICATION

Many CTE teachers come to the high school classroom from industry and have not had formal training in education and classroom management. As a result, teaching certification is required. There are various types/levels of teaching certificates: temporary, provisional, initial, permanent, and lifelong. The CTE Central Office works closely with CTE teachers to guide them in acquiring the necessary coursework for their teacher certification(s). Teachers are required to get teacher certification, keep track of when renewals are needed, and pay for the classes on their own.

Beginning June 1, 2011, all educator certification applications were required to be submitted electronically through the DESE's new online certification system. To begin the application process, applicants (new graduates, as well as educators seeking renewals and upgrades) will need to create a user I.D. and profile. Once an individual account has been created and access is established, the applicant can select the appropriate online application to complete and submit to DESE.

All requests for certification must be made through the online certification system.

- [Guide to Understanding Certification Web Applications](#)
- [Access to the New Certification System](#)
- [PowerPoint handout](#) from the recorded April 22, 2011 webinar that provided an overview of the Online Educator Certification System
- **Please be certain to submit all supporting documents to the CTE office prior to completing your online application.**
- **If you have additional questions or have difficulty logging into the certification web applications, please email certification@dese.mo.gov or call (573) 751-0051.**

Below are a few steps to help start this process:

1. To access the new system, you will first be required to **create a user id and password**. It is *extremely* important that you remember the user ID and password you create. These will be used to access your certification record and all future applications you wish to submit to the Department. NOTE: you should create only one user ID. Creation of multiple user ID's will lock the system and you will be unable to access your profile page and certification record.
2. Create your user ID and password at: <http://k12apps.dese.mo.gov/webLogin/login.aspx>. This login page is also found under the box – DESE Web Applications. Access to this can be found on both websites – dese.mo.gov (main home page) and on the Educator Certification page of the website.
3. After your user ID and password are established, you will need to click on the link entitled "Licensure Request Access." Once you have requested access as an Educator (after you have done this once, you will not be asked to do it again), then you will click the "Licensure" link to enter the Certification System and can now create a "profile."
4. You should now be in the new Certification System where you can access your records and apply for a Missouri certificate. By completing the online profile AND an application, you will be able to access your certificate within a week. The new system will also show the status of your background clearance and Praxis scores.
5. You may always access your certification account by choosing "DESE Web Applications" at the [DESE Homepage](#) or at [DESE Education Certification](#). As you complete your online profile and application, you will need to complete the following:
 - **Profile Page** – use your proper/ legal name that matches the name on your transcript. To correct any mistakes you may have made, you will need to contact DESE. Educator Certification 573-751-0051 or certification@dese.mo.gov

- **New Applications:** select the tabs for the appropriate certification applications
- **Conduct and Investigations:** please be honest
- **Sign and Submit:** Read carefully! This gives DESE information and permission to investigate
- **Additional Information:** view the status of your fingerprints, Praxis II scores, and application statuses. Schools will also be able to view your fingerprints and any Praxis II tests taken.
- **Print Your Missouri Teaching Certificate:** You will NOT be mailed a paper certificate. Click the "Certificate Status" link to the left in blue; when it is complete you will be able to view and print your Missouri CTE Certificate.

Salary, benefits, and other teaching requirements (such as a background check) are administered through the St. Louis Public Schools Human Resource Office.

PROFESSIONAL DEVELOPMENT

It's important to keep track of Professional Development courses taken and other efforts towards certification because this information will have to be turned in every year.

MyLearning Plan is the leading provider of web-based educator evaluation and professional learning data management solutions used by SLPS as a fully integrated solution to help schools improve student growth through effective management and support of educator evaluation and professional learning. This systems is required for entry of professional learning goals and PD tracking.

First time users

USERNAME= SLPS Email Account

ex. Jon.Doeux@slps.org

PASSWORD-*changeme*

<http://www.mylearningplan.com>

BTAP – Beginning Teacher Assistance Program offered by various colleges and universities often on Saturdays for new teachers. Usually there is no cost if approved via SLPS PD offices, but required to attend.

Mentoring Programs for New Teachers (usually first two years of teaching) – There are 2 types of mentoring programs. 1) State level where DESE (Department of Elementary and Secondary Education) assigns a teacher in the new teacher's pathway to mentor and be a resource. This includes observations/evaluations and some travel to and from the new teacher's home school to the mentor's school. 2) District level where the St. Louis Public Schools Professional Development Office assigns a mentor teacher to the new teacher, usually both teachers are housed in the same building.

Teachers must complete the Mentoring Programs to update/maintain their teaching certification.

National and State conferences – The national ACTE organization holds an annual conference, usually in November for CTE teachers, administrators, and business/college persons. To attend, you must have permission from the CTE Central Office and your building principal. The state MOACTE organization holds an annual conference in July in Springfield, MO for CTE teachers, administrators, and business/college persons. Attendance is encouraged and paid for by the CTE Central Office. Other conferences related to teachers' content areas is encouraged.

SLPS Professional Development Days – The District has included professional development days in the school calendar. These opportunities may be with the CTE Division or at your respective high school. Occasionally, extra service pay will be awarded depending on the time of the professional development activity.

Professional Development opportunities that require travel and expense reimbursement must be approved by the building principal and CCR Associate Superintendent. Travel forms are required and submitted to the District CTE office no later than 4 weeks prior to the travel request. Be sure to check with the CTE Office if you have questions about the travel forms.

CURRICULUM

Every CTE course has curriculum that must be used and available on the teacher's desk.

1. As soon as teachers receive their school building assignment, they should discuss their teaching schedule with building administrators (principal, assistant principal, teaching and learning facilitators). **The CTE teacher should ask for a copy of the classroom observation form that is used by administrators when they visit your class to observe your teaching methods.**
2. Your CTE Specialists should assist with walking you through the curriculum format. New teachers also have building mentors and local pathway mentors to help with teaching materials.
3. CTE Classroom materials have a state approved curriculum with approved textbooks and resources. Curriculums must be up to date and inclusive of major course/class or pathway changes, and therefore, have to be revised, rewritten or totally discarded in favor of the appropriate approved materials. **All CTE curriculum was perpetually approved as of July 2012. Curriculum is updated through amendments as needed, keeping current with DESE, local, industry, and national standards.**
4. Although states may mandate certain items be a part of the curriculums, local boards of education may have particular formats adapted for their own purposes. Also, Advisory Committees can provide supplemental resources to assist the teacher with current industry trends, and make suggestions for curriculum textbook selections.

In the 2011-2012 school year, the addition of the Work Ethics Policy into the CTE curriculum was introduced. High school principals are determining the extent of this practice at the time of the writing of handbook.

On page 35, there is a sample lesson plan from Mr. Tom Bast, Database Management Instructor, at Clyde C. Miller Career Academy. This is an 11th grade lesson for weeks 13 & 14 of the school year.

The St. Louis Public Schools utilizes several lesson plan formats, so it is important to check with your school's Teaching and Learning Facilitator and Mentor to see what format your lesson plans must follow. Once the format is determined, lesson activities can usually be easily inserted from the curriculum.

ADVISORY COMMITTEES

Advisory Committee Purpose The ultimate purpose for an advisory committee is to help ensure that a high quality education for each student is delivered within a CTE classroom. This includes the curriculum meeting state standards, the preparation of the instructor, the quality and condition of the equipment, access to and preparation for certifications, continuity, equity and timeliness, etc. Committee members provide recommendations and advice. As such, members are predominantly from the industry, career or college area of the CTE program. They act as advocates and protectors for the integrity of the CTE program and do so as volunteers.

What the Advisory Committee Does: The Advisory Committees have three major roles:

1. *To advise:* The advisory committee assesses specific areas of the career and technical education program and makes suggestions and recommendations designed to improve that specific area. Such recommendations could include the modification of curriculum, purchase of new instructional materials or equipment, design of an articulation agreement or dual credit option or adoption of a new internship policy.
2. *To assist:* The advisory committee helps the instructor carry out specific activities, projects or events. These could include judging competitive skill events, identifying senior projects, visiting internship sites, setting up a scholarship program, serving as classroom speakers or case study coordinators or obtaining media coverage for special events.
3. *To support and advocate:* The advisory committee promotes the career and technical education program throughout the community. Promotion or marketing could include talking to legislators, speaking for career and technical education at board meetings, writing articles for local newspapers or arranging publicity.

Responsibilities for Advisory Committee Members

- Review course goals, objectives and content and recommend required changes to accommodate the changing needs of the industry.
- Evaluate existing equipment and make recommendations for updating or replacement.
- Make recommendations regarding program facilities to ensure they meet current industry standards and, when appropriate, that they simulate the current work environment.
- Work with the instructor in long-range planning of curriculum, equipment and supplies.
- Provide the CTE instructor with information on the specific requirements for entry level employment in the industry and requirements for entrance into post-secondary institutions.
- Assist in creating college articulation agreements or dual credit experiences for the students.
- Help to identify the certifications available in the industry, how the components can be integrated into the curriculum and sources of money available for students to take the exams upon high school graduation.
- Assist with identifying experiential program components that might include field experiences, shadowing and internships.
- Assist with ideas for the operation of the Career and Technical Student Organization (CTSO) connected to this CTE program so that students get leadership experience.
- Examine the equity in the classroom to ensure that the class is balanced in its student representation and that services are being delivered fairly.
- Serve as a co-teacher for a particular topic or find others who can. (*see template*)
- Advocate at the state and local level for legislation and other priorities that will assist CTE.
- Help create and implement projects that will assist the delivery of effective and high quality technical education experiences for the students, such as senior projects, competitions, etc.

- Attend advisory committee meetings and come prepared to offer your wisdom and industry knowledge.

PLEASE BE SURE YOUR ADVISORY MEMBERS KNOW WHAT THE RESPONSIBILITIES ARE OF SCHOOL ADMINISTRATION AND THE SCHOOL BOARD.

How Long Do Committee Members Serve?

The individuals who serve on an advisory committee typically have full-time jobs and busy schedules. Plan to devote sufficient time for participation in committee activities to provide the needed input to be effective.

Usually, the length of the commitment is one to three years, although that may vary. Terms are usually staggered with one-third of the membership being replaced each year.

It is the responsibility of the CTE Instructor to develop the advisory committee. Consider sitting down with your principal and the CTE Specialist to discuss the composition of your advisory committee. Think about corporations, unions, associations and colleges that could be associated with your program career focus. Brainstorm who or what departments should be contacted about committee involvement. Before making contact, determine the type of person you are looking for, the estimated time commitment per year and the frequency of meetings or special projects. You may want to secure a few members initially and get their help brainstorming.

The CTE Central Office has developed two guidebooks to be used for the establishment of the Advisory Committee. One guidebook is for the teacher and gives suggestions on how to implement the Advisory Committee. The other guidebook is for the Advisory Committee members and gives information about the expectations of the members of the committee. These are provided to teachers from their pathway Specialist.

Remember! As the CTE teacher, you are instrumental in establishing the Advisory Committee, but you want the committee members to actively participate and take ownership of the planning and leading of Advisory Committee meetings.

INTERNSHIPS

Internships are work experience for high school credit provided to seniors during the second semester or their CTE program. The CTE teacher is instrumental in planning and implementing this activity for their students who are supervised by an on-site trainer and the classroom teacher. All high school CTE programs, where appropriate, will have internships related to the program.

Students earn high school credit for interning. Students are not paid.

Qualifications

- Students currently enrolled in the senior year of a two-year Career and Technical Education Pathway.
- Students with a minimum of 16 credit hours of the 24 credit hours required for graduation
- Students recommended by the appropriate CTE Instructor on the basis of demonstrated knowledge, skills, attitudes, and behaviors.

A Training Plan for each internship placement will be established by the CTE Instructor for the Internship Site to utilize during the internship.

Supervision of students will be conducted by the site supervisor and CTE Instructor. Internship Site Visit Summaries will be completed by the CTE Instructor.

Intern evaluations from the site supervisors will be considered by the CTE Instructors to constitute the student's internship grade.

As a new or veteran CTE teacher, this is one of the most demanding aspects of the teaching position. The Advisory Committee can play a key role in helping to find internship sites and in preparing the students for their assignment at the internship. CTE Specialists and Central Office Staff can be resources for internship sites. The school district carries liability insurance for CTE interns, but parent permission slips are required. The permission slips used for field trips are used for interning as well; this can be found on page 42. Once returned they must be kept on file. ***An updated Internship Handbook for teachers to assist with this program requirement is on the district's web site.***

Teachers work with internship site supervisors in evaluating the student's performance. Attendance, journals, and solving work problem issues are key components to the success of the student in this aspect of the CTE program.

Go to www.slps.org/ccr for a copy of the Internship Manual

STUDENT ORGANIZATIONS

DESE stresses the importance of CTSOs and looks for these when they visit a school district to do their MSIP assessment. For students, participation in the student organizations provides unique opportunities to learn and hone their leadership skills through student conferences, competitions, workshops, community service, and other activities.

As a teacher, you will guide your students toward appropriate organizations in which to participate. Currently, the St. Louis Public Schools participate in **DECA (Marketing)**, **FBLA (Business)**, **National FFA**, and **SkillsUSA (Leadership)**. The Culinary program also competes with other high schools in “cook-off” competitions. First Robotics is also a District student competition program for various CTE Programs at different high schools working collaboratively.

If you do not have a student organization or student chapter at your school, talk with your building principal and CTE Specialist about starting one. Then research the DESE website, College and Career Readiness link-Student Organizations, to start a chapter or new organization at your school. Competitions and activities with CTSO’s count as Professional Development Units (PDU) for teachers and active advisors.

NOTE: Fundraising is extremely important to the success of the student membership organization. Perkins dollars may NOT be used for the expenses related to the activities and competitions associated with these organizations. There are some Board of Education General Fund monies that can be used to help defray the cost of bus transportation to and from competitions.

PROGRAM OF STUDY (POS)

WHAT IT DOES:

The primary purpose of Programs of Study is to provide successful student transition between secondary and postsecondary education. The Carl D. Perkins Career and Technical Education Improvement Act of 2006 called upon states and local education agencies to create secondary-to-postsecondary sequences of academic and career education coursework that lead student to attain a postsecondary degree or industry-recognized certificate or credential. At a minimum, Programs of Study must:

- Incorporate and align secondary and postsecondary education elements (curriculum)
- Include academic and CTE content in a coordinated non-duplicative progression of courses (sequence of courses)
- Offer the opportunity, where appropriate, for secondary students to acquire postsecondary credits (articulation/dual credit/enrollment)
- Lead to an industry-recognized credential or certificate at the postsecondary level, or an associate or baccalaureate degree.

WHY DO IT:

- POS ease transitions for students as they move from secondary to postsecondary education and into the workforce. They also help students avoid pitfalls that tend to derail their career plans, waste tuition money, and frustrate their parents.
- They motivate students who have goals and are interested in their studies.
- Provide opportunities for teachers at all levels and subjects to collaborate on curriculum, teaching methods, and desired outcomes of instruction. The process empowers teachers by allowing them to design effective and efficient instruction that helps their students achieve their goals.

HOW TO DO IT:

The development of Programs of Study is a collaborative effort among schools and colleges to seamlessly coordinate classroom instruction and support experiences and activities for a particular career cluster or pathway, which includes career and technical student organizations, career development and guidance, and community participation. It is built upon a curriculum that addresses cluster/ pathway knowledge and skills, as well as national and state academic standards.

Development of Programs of Study can be accomplished by:

- Contacting your Central Office Staff for assistance.
- Utilizing the *10-Step Process to Implement Programs of Study in Missouri* located on the *DESE website*.
- Reviewing and completing the appropriate Programs of Study Implementation Modules.

WHO SHOULD PARTICIPATE:

- District curriculum directors
- Career education directors
- Career education teachers
- High school principals
- Academic teachers
- Guidance counselors
- Community college faculty and administrators

TECHNICAL SKILLS ASSESSMENTS/INDUSTRY RECOGNIZED CREDENTIALS

TSA GUIDELINES

The Perkins Act of 2006 (Perkins IV) requires Technical Skill Assessments (TSA) to measure the percentage of Career and Technical Education (CTE) concentrators who pass a skill assessment aligned with industry-recognized standards, if available and appropriate. The grant also provides funding for the cost of taking the TSA.

TSA is intended to be taken after a student becomes a concentrator and completes a program. It is not intended to be taken after every course. All concentrators who complete their program will be expected to take an assessment. The test can be taken at any point in the school career as long as the POS is completed. However, the results will not be compiled until the student leaves the educational institution. Graduation from institutions is not strictly necessary but is highly encouraged. Scores will be reported in the student's core file in the Missouri Student Information System (MOSIS) June cycle submission. MOSIS only reports one TSA; if multiple POSs have been followed and multiple TSAs taken, it will be a local decision to determine which assessment most accurately reflects the pathway of the student.

Industry Recognized Credential (IRC): A portable, recognized credential that validates an individual has successfully demonstrated skill competencies in a core set of content and performance standards in a specific set of work-related tasks, single occupational area, or a cluster of related occupational areas.

TSA TOOLSs

Currently, the Central Office has determined that assessment tools developed by national organizations such as American Association of Family and Consumer Sciences (AAFCS), SkillsUSA, and NOCTI meet the criteria established by Perkins IV. The state will continually monitor and incorporate new assessments as they become available and if appropriate. **Most of our TSAs are with NOCTI and administered in April.** The NOCTI website has a list of blueprints or overviews of what skills will be measured during the assessment, visit <http://nocti.org/Blueprint.cfm> for more information.

Approved TSAs can be found at the following website, along with guidelines to assist in determining if an assessment meets the Perkins IV criteria:

http://dese.mo.gov/divcareered/perkins_iv_tsa.htm

TSA SCORES

To determine if a student has passed or failed a TSA consult the following guidelines:

- Industry provides a pass/fail cut score.
- Industry does not provide a cut score, but has a national norm. Students who meet or exceed the national norm are considered as passing the assessment; those who do not, as failing.
- If industry does not provide a cut score or a national norm, then the cut score is 65%

TSA PROCTORS

1. There must be proctors for TSAs
2. Teachers are responsible for locating appropriate businesspersons to proctor their respective TSA, if it is a demonstration, hands-on assessment. The businessperson's resume is needed for documentation. The Advisory Committee members can be a resource in this selection of proctors.
3. The proctors resume must be on file at the CTE Central Office prior to the assessment administration – at least 2 weeks.

ARTICULATION AGREEMENTS AND DUAL CREDIT/DUAL ENROLLMENT

Secondary and postsecondary career and technical education programs have traditionally supported articulation agreements and dual credit/dual enrollment to provide students with hours of college credit, prior to high school graduation. The difference being that articulation agreements are for a specific college or university and dual credit may be accepted at any college or university provided the curriculums match, the CTE teacher is also certified to teach at the college level, and a tuition fee is paid by the student (often this is waived or reduced for SLPS high school students). In the past, these agreements enhanced CTE programs but were not required.

Currently, with more accountability regarding the funding allotments and assessments of CTE programs, articulation agreements and dual credit have taken on more importance. Nationally and in the state of Missouri, CTE programs will be measured by meeting the components of the 10 step Checklist for a Program of Study. In this checklist, articulation agreements and/or dual credit options are key components in curriculum development and alignment with instructional and industry standards. And now, a required component for a Program of Study to show the transition from secondary to postsecondary education and/or training.

How do we do this? A collaborative effort among the CTE teacher, Central Office staff, Advisory Committee, and college or university needs to be established to acquire these agreements. The teacher and Advisory Committee are critical in making the initial contact with colleges. The Central Office staff can assist with documentation and timelines. It is important to note that these agreements usually have an expiration date so reapplying for them is an ongoing process. All of the St. Louis Public Schools articulation agreements and dual credit agreements are between the District, not individual high schools, and the postsecondary institution.

To date, we have several articulation agreements and dual credit agreements. We have one Dual Enrollment program with Ranken Technical College. As a Division, we will work towards all our CTE programs having an articulation and/or dual credit component.

FOLLOW-UP WITH GRADUATES

The CTE follow up is done at 90 and 180 days following the student's high school graduation. This data is part of the District's MSIP accreditation points. Currently, the follow up phone calls are made by the CTE Central Office staff with the assistance of the CTE teachers who provide the senior exit interview information sheets. Prior to graduation, CTE teachers have graduating seniors complete the exit interview form which includes their contact information and postsecondary plans. A sample form can be found on page 40 with instructions to access the online survey to be taken by students.

All high school graduates from CTE programs are called.

- Programs are identified by an assigned DESE code.
Example: business program – DESE Code is 0204
- Graduates also have an assigned DESE code based on the CTE program they took in high school

Follow Up questions required for CTE:

- Are they attending college or a university? Is it a two year or four year institution? Have they picked a major or area of study?
- Did they join the workforce? In what area?
- Are they in non-postsecondary training and what is their major?
Example: Ranken Technical College
- Did they join the military?

FIELD EXPERIENCES/TRANSPORTATION

The CTE Central Office has a budget for buses for field trips. Trips must pertain to the theme of the CTE program and include as many students as possible. Example, if we have two of the same programs at two different schools, we would try to make the trip arrangements so both schools can participate. It is important to note that field trips must be planned 2-4 weeks in advance. Due to a limited budget, each teacher is allotted a field trip per school year outside of activities related to CSTOs and activities coordinated by the CTE office.

CTSO competition trips are a priority. We must use the St. Louis Public Schools contracted transportation vendor. The CTE Executive Director approves all field trip requests for buses, and the Program Manager currently manages the bus budget and orders the buses. Teachers need their building principal's approval for any field trip. This is done by filling out the Educational Field Trip Leave Form (provided at the high school office) and obtaining the principal's signature. Also, teachers must have a Parent Permission Form signed for each student who participates in an off-site field trip. These forms are also provided in the high school office and can also be found on pages 42 and 43.

The Advisory Committee can be an excellent source for student field trips or related programs, both in the work place and in the classroom. The CTE Program Manager also works with businesses, organizations, colleges, and community resources on theme based programs that are offered to CTE students.

Field experiences are as much for the teachers as the students. Teachers are encouraged to do preparation and follow up activities related to a field experience. This is beneficial to students who are unable to attend the field experience. The Program Manager can be a resource for pre and post activities.

Lesson Plan Example – for Database Management

Topic(s): SQL SubQueries and Group Functions / Program Web Development/ Java Programming

Overall Goal(s): To synthesize the build of SQL subqueries and group functions in computer programs; to build couplings and cohesion in Java programming; and continue program based web page development.

Prerequisite(s): None

Vocabulary: Structured Query Language (SQL), select, from where, equijoins, aliases, min, max, sum, avg, group by; Program web commands – default, asp.NET, standard toolbox, web objects WYSIWYG; Java programming – cohesion, coupling, encapsulation, refactoring.

Hardcopy Reference(s): Oracle 9i: Introduction to SQL; Chapter 6 & 7; Oracle Java 2 – A Beginner’s Guide; Chapter 5 & 6.

Additional Resources (including Internet):

Microsoft Expressions Web QUE In Depth;
Ch. 1-4;
Objects First with Java Using BlueJ ;
Chapter 7;
SkillsUSA Professional Development Plan.

Estimated Time (Lesson & Lab):

Lesson: 2 days
Lab: 3 days

Assessment Type(s):

In-class Q & A
Worksheets
Performance Demonstrations
on Computer Workstations

Show-Me Standards:

Process: 1.1, 1.2, 1.5, 2.1,
2.3, 2.6, 2.7, 3.1,
3.3, 4.4, 4.5, 4.6,
4.7, 4.8
Content: CA 1,3,4,6; SC8;

Highest DOK Level

Lesson: 3&4
Lab: 3&4

Instructional Technology: Smartboard demonstrations; individual computer workstations with one-on-one teacher assistance; visual and hard copy study guides; worksheets; data diagrams.

Cross-Curricular Integration: Communication Arts / Math /Science / Social Studies

Lesson Outline:

1. SQL subquery and group function building and generation
 - a. Review the different type and placement of group functions
 - b. Understand the distinct and group by uses with group functions
 - c. Demonstrate the order of SQL statement keywords with group functions
 - d. Review the structure and format of subqueries
 - e. Review examples of subquery format and statements
 - f. Continue the use of an Oracle Academy SQL database statement generator
 - g. Write SQL group functions and subqueries from database word problems
 - h. Run SQL group functions and subqueries against the statement generator and troubleshoot / fix errors

2. Program Based Web Development
 - a. Review the use of tables and toolbox objects for the web development program
 - b. Demonstrate how to build style options on a web page with the web development program
 - c. Add table property options to the web page in the web development program
 - d. Manipulate object properties to embellish the page layout within the web development program.

3. Computer Programming with Java
 - a. Introduce the use of coupling and cohesion in a Java program
 - b. Implement encapsulation to reduce coupling for the program
 - c. Work with implicit coupling and responsibility driven design in the program classes
 - d. Understand cohesion and refactoring in a Java program

4. Leadership Components
 - a. Identify effective components of an employment portfolio
 - b. Explore ethical practices in the workplace and school

Instructional Strategies: Class discussion / Guided practice / Lab assignments

Specific Objectives and Competencies:

1. Generate SQL subqueries and group functions in a server side program.
2. Develop a website with Desktop objects and principles in a web development program.
3. Implement coupling and cohesion in a computer program.
4. Identify effective components of an employment portfolio.
5. Explore ethical practices in the workplace and school.

Substitute Plan Activities:

- Direct the students to develop a program web page using the instructor's specified theme.
- Complete the worksheets on effective portfolios and ethical practices.

Differentiation (Content/Process/Product/Strategy):

- **Language considerations:**

- **Accommodations:** Use the class IEP file to identify any special-needs students and the nature of their learning issue(s). Students with ADD/ADHD and reading/math challenges should be allowed as much time as needed to complete their assignments. There are no physically challenging components this week, so special accommodations beyond those required for regular classroom activities should not be necessary.

- **Acceleration/Enrichment Opportunities:**

- **Re-teach:**

Student Learning Activities:

- Build a video game computer program assignments

- Solve SQL subquery and group function word problems and run them in a database generator error free
- Develop a program based table web page (using the standard toolbox) computer performance assignments
- Effective employment portfolio worksheets
- Ethical practices worksheets
- Decimal worksheets

Lab Activities:

Computer Workstation Program and Performance Demonstrations

Note: Performance Assessments are used for testing. Teachers should not use True/False format exams.

DATE/WEEK OF _____

GRADE LEVEL _____

CONTENT AREA		DIFFERENTIATED INSTRUCTION/CROSS CONTENT INTEGRATION
Goals: Big Idea/Concept		HOW will you reach the Content? (groups, strategies, accommodations, content variation, etc.)
<ul style="list-style-type: none"> Refer to GLEs/CLEs or ... Big Idea: 1, 2, 3 (from Scope and Sequence)– This is your overall topic for your lesson 		<ul style="list-style-type: none"> Differentiated Instruction: <ul style="list-style-type: none"> Specific instruction to meet diverse student needs Varied content, process, or product One plan with multiple activities Cross Content Integration: <ul style="list-style-type: none"> Connections to other disciplines Delivery Methods: <ul style="list-style-type: none"> Classroom discussion Group work Think, pair, share Guided practice/modeling Learning Centers Lab activities Question and answer Student presentations
Grade Level Expectation/Objective: (WHAT are you going to teach?)		
<ul style="list-style-type: none"> GLE/CLE: More specific (what you're actually going to use and do in class)—in sentence format (include numerical reference) Objective: "SWBAT"—student friendly Objective is MEASURABLE 		
Essential Questions(s)/DOK: Higher Order Questions (scalloped questions to get to Big Idea)		
<ul style="list-style-type: none"> Questions that can be answered by students by the end of a lesson or unit Include reference to DOK level (1-4) Open-ended questions without obvious answer 		
Assessment/Performance Task: How will students SHOW what they have learned?		
<ul style="list-style-type: none"> Formative (for learning) and Summative (of learning) Performance Task—can span multiple days of instruction Aligned to objective Included scoring rubric Independent Practice ("You Do") 		<ul style="list-style-type: none"> Completed AFTER the lesson is taught Teacher's thoughts regarding the lesson Feedback on student successes and struggles
Vocabulary	Vocabulary Strategies	Retaching Strategies
<ul style="list-style-type: none"> Words used to achieve objective Word Wall 	<ul style="list-style-type: none"> How vocabulary will be taught Use CORE strategies 	<ul style="list-style-type: none"> Things to do AFTER the lesson Based in student needs Improvements to instruction How teacher will change lesson for re-teaching or remediation
Technology/Manipulatives		
<ul style="list-style-type: none"> Materials or supplements used during a lesson to enhance learning Examples- graphing calculators, handheld calculators, student computer(s), lab 		

<i>equipment, projector, teacher workstation, interactive whiteboard, PowerPoint</i>	
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KEY

Big Idea- The core concepts, principles, theories and processes that should serve as the focal point of curriculum, instruction and assessment.

Grade Level Expectations- The thought or belief of what a student should know at a particular grade level by the end of the school year. Missouri's grade level expectations are aligned to the Show-Me Standards and The Frameworks from the Curriculum Development.

Objective- The desired concept/skill that is to be learned.

Evaluation- The way that you will assess what the student has learned.

Performance Task- An assessment exercise that has specific performance criteria (this type of assessment needs a rubric/scoring guide).

Essential Questions- A thought-provoking question designed to engage student interest and guide inquiry into the important ideas in a field of study.

DOK-Depth of Knowledge- The degree of knowledge (thinking) complexity elicited from students on an assessment.

Vocabulary- The words that are necessary for students to know in order to grasp a skill/concept.

Vocabulary Strategies- The research based method/strategy used to help students figure out the meaning of unfamiliar words.

Technology- The tools or aids used to teach your lesson.

Differentiated Instruction- A process to approach teaching and learning for students of differing abilities in the same class. To differentiate instruction is to recognize and acknowledge students with varying background knowledge, readiness, language, preferences in learning and interests.

Teacher Reflections- A conscious mental and purposive process relying on thinking/reasoning/examination of one's own thoughts and feelings.

Student Work Analysis- The explicit process used to analyze student work against a set of standards and scoring guide.

Senior Exit Survey

The purpose of this survey is to collect your contact information for future Alumni events, to record your post-secondary plan, and offer support if you need help with planning. This information is very important and we ask that you answer all questions honestly and accurately. Thank you in advance for your cooperation. (complete survey online at www.slps.org/ccr, look for counselor corner and click exit survey)

First Name: _____

Last Name: _____

High School: _____

High School Counselor: _____

Graduation Date: _____

Phone: _____

Email Address: _____

Address: _____

Address 2: _____

City/Town: _____

State/Province _____

Zip/Postal Code _____

Country _____

1. Please provide the following information

Facebook _____

Twitter _____

Linked-in _____

Other Social Media Site (list site and profile name) _____

2. Please provide your profile name for your social network site(s)

3. Please select your plans immediately following high school graduation (Select all that apply)

- Attend 4-Year College
- Attend 2-Year College
- Attend Non-College Credit School (Trade or Technical School)
- Enlist in the Military
- Career Training Program
- Work a Job
- Currently Employed
- Not sure, I would like help planning my future

4. Please list the name of the college or career training program you will be attending (place N/A if not attending college or a training program)

5. Please list your college major (if not attending college place N/A)

6. Please list the type of work you do for a company (place N/A if not working)

Parent Name: _____

Parent Email: _____

Parent Address (if different): _____

Parent Phone Number: _____

7. Please provide your parent/guardian contact information

Relative Name: _____

Relationship: _____

School Name: _____

8. Please provide the name of one relative attending in SLPS next year (if you have none place N/A in each space)

9. Please provide the name of the person who will always be able to contact you (grandparent, aunt, uncle, friend etc.)

Name: _____

Relationship: _____

Telephone Number: _____



APPLICATION FOR EDUCATIONAL FIELD TRIP

NOTE: A minimum of 1 Field Trip per semester per grade is expected.

Field Trip forms **MUST** be received 2 weeks in advance of date to ensure timely approval.

*Teachers must complete form and forward to Principal for final authorization.
Principal must submit **completed** form to Education Officer. Incomplete forms will be returned for completion.*

School(s): _____ Date Submitted: _____ Date of Field Trip: _____

Departure time from school: _____ Pick-up time from venue: _____

Return time to school: _____

Destination: _____

Address: _____

(must be completed) _____

Notes: _____

Teacher: _____ Grade: _____ No. of Pupils: _____

Chaperone(s) – Administrator or Designee must accompany all over night field trips Chaperone(s)

Name:

Position:

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Total Number of Participants (on bus): _____
Include additional field trip form if additional space is needed.

Curriculum Alignment (Please indicate entire number(s):

GLE: _____ or Mo. Standard

Field Trip Goal/Objective:

Pacing Guide Lesson Alignment:

Academic Preparation Activities:

Academic Follow-up Activities:

Primary purpose of this field trip is to help achieve the indicated goal/lesson alignment by:

Lunch Plans if applicable: Select Type **← please click here**

If Lunch is purchased elsewhere, please list company below:

Transportation Type: Select Type **← please click here**

If Transportation is ordered/paid by department or company other than SLPS Education Office, please list below:

Guidelines	
Elementary	
PreK	1 adult/4 pupils
K.dg.	1 adult/6 pupils
Gr. 1	1 adult/8 pupils
Gr 2/3	1 adult/12 pupils
Gr 4 -8	1 adult/15 pupils or 2/class of 25
Secondary	
Gr. 6-8	1 adult/15 pupils or 2/class of 25
Gr. 9-12	Ratios to be determined with Ed. Officer

*Please refer to SLPS
Board Policy #R6153
and Regulation R4770

Teacher/Applicant Signature

Principal Signature

Education Officer
Initial

ST. LOUIS PUBLIC SCHOOLS FIELD TRIP PERMISSION SLIP

SCHOOL: _____ **TRIP DATE:** _____

GRADE/CLASS:

PLEASE NOTE THE FOLLOWING REGARDING THE FIELD TRIP:

Where: _____

Activity: _____

Departure From School (Time): _____

Return To School (Time): _____

Person(s) in Charge:

1. I have been informed of the details of this educational field experience.
2. My child has my permission to participate in this supervised field experience.
3. I agree to instruct my child to obey all rules, regulations and instructions given by teachers and/or authorized school personnel. I further agree that no teacher or authorized personnel shall be held responsible or liable for injuries or other mishaps caused by my child's deliberate disobedience of rules, regulations or instructions.
4. This field experience is considered as school work and will be conducted as a regular class.

I GIVE PERMISSION FOR _____ TO TAKE THE FIELD TRIP
(Student's Name)

TO: _____

THIS TRIP IS PLANNED TO EXTEND A UNIT OF STUDY WITHIN THE SCHOOL CURRICULUM.

YOUR SIGNATURE INDICATES THAT YOU HAVE READ AND AGREED TO THE ABOVE AND THAT WE HAVE YOUR PERMISSION TO TAKE YOUR CHILD ON THIS FIELD EXPERIENCE.

(Parent or Guardian Signature)

Home

Phone: _____

Work Phone: _____

Address: _____

Person to contact in an Emergency: _____

Emergency Phone # _____

Field Trip Application Form (can be obtained in school office)

Media Release Form

St. Louis Public Schools Media Release Form

I understand the photograph(s) or video or audio recording(s) taken of my child by agents, employees or representatives of the Saint Louis Public Schools (hereinafter called "SLPS") shall be used in connection with the SLPS's dissemination of information by its public service and academic programs to the general public.

I hereby irrevocably authorize the SLPS to copy, exhibit, publish or distribute any and all such images and audio of my child or wherein he or she shall appear, including composite or artistic forms and media, for purposes of publicizing SLPS programs or for any other lawful purpose. In addition, I waive any right to inspect or approve the finished product, including written copy, wherein my child's likeness appears.

I hereby hold harmless and release and forever discharge the SLPS from all claims, demands and causes of action which I, my heirs, representatives, executors, administrators or any other persons acting on my or my child's behalf, may have by reason of this authorization.

Child's Legal

Name

Date of Birth

I hereby certify that I am the parent or guardian of, the minor named above, and do hereby give my consent without reservations to the abovementioned.

Parent/Legal Guardian

Date

Signature

Printed Name

List of Central Office Staff

Name	Position	Phone
Dr. Elizabeth Bender	Associate Superintendent of College and Career Readiness	314-345-4585
Pamela Bryant	Secretary (CTE Teacher Certification/PD, Purchasing)	314-345-4530
Dr. Dan Edwards	Director of To and Through (AP, Dual Credit, Dual Enrollment, Early College Academy)	314-565-1453
Dr. Miranda Avant-Elliott	College and Career Readiness Supervisor (Data Management/CCR MSIP, CCR Programs, HS Counseling Supports)	314-345-2363
Tanisha Joyce	CCR Curriculum and Events Facilitator	314-345-5703
Paul Cady	Lead Grants Analyst (CTE Budget and Perkins)	314-345-4532
Spencer McCall	College and Career Readiness Specialist (A+, Mobile Enrollment, and COMPASS Testing)	314-345-4683
Valerie Wilson	CTE Program Manager (K-12 CTE Programs and Initiatives and CTE dual Enrollment/Credit)	314-345-4540
James “Bob” Green	CTE Curriculum Coordinator (CTE Data Management, Curriculum Development, and Course Planning)	314-345-5716
Dawna Wharton	CTE Specialist (Roosevelt, Beaumont, Clyde Miller, & GSTEM)	314-345-5713
Veronica Powell	CTE Specialist (Carnahan, NW, Vashon, CVPA, NJROTC, Sumner, Soldan, McKinley, Metro, Collegiate School of Medicine and Bioscience)	314-345-5717

Program Specialists are responsible for working with their pathway CTE teachers in the purchase of equipment, curriculum, management of the classroom, identification of resources for Advisory Committees/Internships Sites, and any **support** needed by the teacher to assure a high quality career and technical education experience for the students.

CTE RESOURCE WEBSITES

www.acteonline.org	Association for Career and Technical Education
www.cde.ca.gov	California Department of Education CTE
www.casn.berkeley.edu	Career Academy Support Network at Berkeley, CA
www.collegetools.berkeley.edu	College Tools for Schools
www.donorschoose.org	Donors Choose Website for your classroom wishes
www.edutopia.org/stem	Edutopia—George Lucas Educational Fund. Online Warehouse
www.fldoe.org/workforce	Florida Department of Education Workforce Development
www.khanacademy.org	Khan Academy academic lessons for all subject areas
www.cte.mnscu.edu/programs	Minnesota State College and University CTE
www.mo-acte.org/	Missouri Association of Career and Technical Education, CTE membership
www.mcce.org	Missouri Center for Career Education – University of Central MO
www.missouriconnections.org	Missouri Connections
www.dese.mo.gov	Missouri Department of Elementary and Secondary Education
www.ncacinc.com	National Career Academy Coalition
www.nccte.org	National Research Center for Career & Technical Education
www.gk12.org/resources/stem	National Science Foundation Graduate STEM Website
www.cte.ed.gov	Perkins Collaborative Resource Network
www.pltw.org	Project Lead the Way
www.careertech.org	State Directors for CTE Consortium (CTE Clusters)
www.cte.sfasu.edu	Statewide Instructional Resources Development Center
www.stemeduc.blogspot.com	STEM education blog site
www.stemcareer.com	STEM resources for students, counselors, educators, & parents
www.stlouisatwork.com	St. Louis job site
www.stlouis-mo.gov	St. Louis Agency on Training and Employment, youth employment
www.stlouisinternship.org	St. Louis Internship
www.doe.virginia.gov	Virginia Department of Education CTE Programs and Initiatives
www.impactonline.org	Volunteer opportunities

Dr. Elizabeth Bender
Associate Superintendent of College and
Career Readiness

David Hardy
Chief Academic Officer

Dr. Kelvin Adams
Superintendent of Schools

