Available Pathway Programs
Pathway Information Sheets

Office of College and Career Readiness
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Available Pathway Programs

Our Mission: To prepare students for a wide-range of careers by offering programs that incorporate rigorous academics, college and career readiness curriculum, and learning opportunities. Our goal is to help students obtain critical workforce skills such as problem solving, communication, and teamwork to ensure career and college success for all students.
## Available Pathway Programs

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Accounting

This course is designed to build a basic understanding of manual accounting principles, concepts and procedures. Activities include: using the accounting equation, completing the accounting cycle, entering transactions to journals, posting to ledgers, preparing end-of-period statements and reports, managing payroll systems, completing banking activities, calculating taxes, and performing other related tasks.

Entrance Recommendations
Must be in the 11th or 12th grade
Pre-requisite: Introduction to Business

Class Requirements
Accounting Technical Skills Attainment Testing

Employment Outlook
Employment of accountants and auditors is projected to grow 11 percent from 2014 to 2024. The median annual wage for accountants and auditors was $67,190 in May 2015.
Advanced Microsoft Applications

If you want to improve your Microsoft skill levels, then this is the class for you! During this two-year program, students may receive certification in Microsoft Word, Excel, Access, and PowerPoint. These certifications can be a powerful instrument for students entering post-secondary education and for real-world applications.

Entrance Recommendations
Pre-requisite: Introduction to Business
Recommended GPA: 2.0 or higher
11th and 12th Grade

Class Requirements
Upon completion of each software application in Microsoft Office students will be required to take a Microsoft Specialist certification exam.

Employment Outlook
Employment of computer support specialists is projected to grow 12 percent from 2014 to 2024. The median annual wage for computer support specialists was $51,470 in May 2015.
Aviation Maintenance

Aviation maintenance includes a wide range of work duties performed on various kinds of aircraft, including helicopters. Aircraft mechanics and technicians diagnose, adjust, repair or overhaul aircraft engines and assemblies including hydraulic and pneumatic systems. The airframe curriculum covers repairs, maintenance, inspection and alterations of the airframe structure, landing gear systems, hydraulic and pneumatic systems and other non-engine/propulsion systems.

Entrance Recommendations
Competency in mathematics, physics, and electricity

Class Requirements
The Federal Aviation Administration (FAA) certifies aviation maintenance technician schools and graduates of these schools are allowed to take the written, oral and practical tests for an Airframe and Power Plant (A&P) license issued by the FAA.

Employment Outlook
Employment of aircraft/avionics equipment mechanics and technicians is projected to show little change from 2014 to 2024. Job prospects will be best for those who hold an Airframe and Power Plant (A&P) certificate.
Business Management

This pathway encourages the development of leadership skills, business structures and operations, business etiquette, ethical business practices, office procedures, time management, multi-tasking, critical thinking and problem solving skills. Students also learn the importance of technology in the business world and how technology is used in Business, Management and Administration.

Entrance Recommendations
Pre-requisite: Introduction to Business
Recommended GPA: 2.5 or higher
90% Attendance is recommended

Class Requirements
Assessment of Skills and Knowledge (ASK) for Business
FBLA membership
Internship participation

Employment Outlook
Employment of administrative services managers is projected to grow 8 percent from 2014 to 2024. The median annual wage for administrative services managers was $86,110 in May 2015.
Computer Networking

This course provides students the opportunity to become familiar with installations, configurations, administration, standards, practices and components of computer networks and the repair of computers. Students will develop problem solving skills and relevant skills necessary to function in today’s information technology workplace. Seniors will participate in an internship to give students an opportunity to use skills learned in a work place connected to previous classroom learning.

Entrance Recommendations
Must be in the 11th or 12th grade
GPA Recommendation: 2.5 or greater

Class Requirements
Networking Technical Skills Attainment Test

Employment Outlook
Employment of network and computer systems administrators is projected to grow 8 percent from 2014 to 2024. The median annual wage for network and computer systems administrators was $77,810 in May 2015.
Computer Science

This pathway is for a student who is interested in the pursuit of computer programming/coding, information systems & technology engineering. Computer science is the study of the theory, design, implementation, and performance of computer software and computer systems including the study of computability and computation itself.

Entrance Recommendations
Pre-requisite: Introduction to Business
11th and 12th grade
The willingness to get frustrated and keep working through that frustration is desirable.

Class Requirements
Prior computer classes are helpful, but not required.

Employment Outlook
Employment of computer programmers is projected to decline 8 percent from 2014 to 2024. The median annual wage for computer programmers was $79,530 in May 2015.
Construction Trades

This pathway introduces students to seventeen core construction trade competencies for varying general labor employment within the construction field. Courses include instruction in blueprint reading and application; communication and interpersonal skills, safety and OSHA requirements; computer technology and construction mathematic calculation. Each student has the opportunity to experience hands-on work experience in each of the fields.

Entrance Recommendations
Recommended Courses: Geometry and Algebra
Desire to work in a construction related industry

Class Requirements
Steel-toe safety work boots and hard hat
Carpenter’s pants and long sleeve button up work shirt

Employment Outlook
Employment of general maintenance and repair workers is projected to grow 6 percent from 2014 to 2024. The median annual wage for general maintenance and repair workers was $36,630 in May 2015.
Cosmetology

The Cosmetology pathway provides students the opportunity to develop life skills, knowledge, and leadership skills in a hands-on salon atmosphere. Students explore sanitation, hair styling, manicuring, shampooing and the principles of hair cutting. This is a two year program in which students accumulate clock hours towards State licensure.

**Entrance Requirements**
Completion of the 10th grade with at least 10 credits
Complete a program and state licensing application

**Class Requirements**
$25.00 State licensing fee
High school transcript
Birth certificate and Social security card
Two 2x2 pictures taken within the last 5 years
95% Attendance Required

**Employment Outlook**
Employment of barbers, hairdressers, and cosmetologists is projected to grow 10 percent from 2014 to 2024. The median hourly wage for barbers, hairdressers, and cosmetologists was $11.40 in May 2015.
Culinary Arts

During this two-year program in the Culinary Arts, students will receive professional chef’s training preparing them for the real world of work in the restaurant, resort, and other food service industries. Safety and sanitation, food prep and stylish cooking techniques will be a part of this program/pathway. Instructors are certified chefs and culinary experts offering their services and expertise in the training of our SLPS students.

Entrance Requirements
11th and 12th grade
Recommended GPA: 2.0 or higher
90% Attendance is required

Class Requirements
Hepatitis A Shot; Tuberculosis (TB) Test
Black pants and Non-skid chef shoes
$15.00 SkillsUSA membership dues

Employment Outlook
Employment of chefs and head cooks is projected to grow 9 percent from 2014 to 2024. The median annual wage for chefs and head cooks was $41,500 in May 2015.
Database Management

The Database Management pathway is a two year program that provides professional Information Technology training preparing students for the real world of work. Opportunities include building databases, working with Microsoft Excel and Access, and using visual coding methods to develop websites.

Entrance Recommendations
11th and 12th grade  
GPA Recommendation: 2.5 or higher  
90% attendance rate expected

Class Requirements
$15.00 FBLA yearly membership dues  
Flash drive  
Journaling notebook

Employment Outlook
Employment of database administrators is projected to grow 11 percent from 2014 to 2024. The median annual wage for database administrators was $81,710 in May 2015.
Early Childhood Care

Do you love to work with children?

The Early Childhood Care pathway provides students with the knowledge and skills needed to work in the child care field immediately after high school – while preparing them to attend college for a degree in child development, education, psychology, social work or other majors. Students can work with simulated manikins, shadow child care workers, and complete an internship working with children in a school, agency or business setting.

Entrance Requirements
This is a three year program: 10th, 11th, and 12th grades

Class Requirements
Family Care Safety Registration ($13)
First Aid Training
CPR Course

Employment Outlook
Employment of preschool and childcare center directors is projected to grow 7 percent from 2014 to 2024. The median annual wage for preschool and childcare center directors was $45,670 in May 2015.
Electricity/Electronics

The Electricity / Electronics program familiarizes students with the common methods used to manage control, and monitor electrical systems. Students will be able to effectively interpret and read schematics containing electrical and electronic components. This pathway prepares students for entry level positions and/or entry into advanced level courses in a technical college.

Entrance Recommendations
11th and 12th grade
Recommended GPA: 2.0 or higher
90% Attendance is required

Class Requirements
Flame resistant shirt, pants and/or coveralls
Insulated pliers

Employment Outlook
Employment of electricians is projected to grow 14 percent from 2014 to 2024. The median annual wage for electricians was $51,880 in May 2015.
Fire Fighter / EMT

The Fire & EMT Academy at Gateway STEM High School prepares and certifies selected Juniors and Seniors for careers in Emergency Medical Services and Fire Fighting (Public Safety). Upon successful completion of the Academy, students will be certified Fire Fighter/EMTs in the State of Missouri.

Entrance Recommendations
High School Juniors (11th grade) with good attendance and at least a 2.0 GPA may sign up for the Introduction to Public Safety survey class. Successful completion of the survey class will make you eligible to apply for the Fire & EMT Academy in the Senior (12th grade) year.

Class Requirements
Students are required to purchase Fire & EMT Academy uniforms and pay for their certification testing. Textbooks, training materials, firefighting gear and medical supplies are available for the students during the class.

Employment Outlook
Employment of firefighters is projected to grow 5 percent from 2014 to 2024. The median annual wage for firefighters was $46,870 in May 2015.
Health Occupations

The Certified Nurse Assistant course is for students interested in pursuing a career in health care. The course prepares students to provide basic patient care under the supervision of a licensed professional nurse. Students complete real-world learning through job shadowing. Students will develop entry level skills to provide comfort, care and preventative treatment to individuals requiring healthcare.

Entrance Recommendations

GPA Recommendation: 2.5 or higher
Recommendation from three teachers
90% Daily Attendance Expected
Recommended Course: Health Careers Exploration

Class Requirements

Immunizations ($25-$50); Family Care Safety Registration ($13); Uniform and Equipment ($25-$50); State Registration ($20); State Certification Examination

Employment Outlook

Employment of nursing assistants and orderlies is projected to grow 17 percent from 2014 to 2024. The median annual wage for nursing assistants and orderlies was $25,710 in May 2015.
Hospitality/Tourism

Hospitality encompasses the vast industry in the travel/tourism, lodging, recreation, food/beverage and convention/meeting planning business. This pathway addresses the management skills and knowledge needed in one of the world’s fastest growing industries. Students in this program explore classes which focus on management skills, leadership, customer service, guest relations and interpersonal skills.

Entrance Recommendations
Must be in the 11th or 12th grade
Recommended GPA: 2.5 or higher
90% daily attendance expected

Class Requirements
Hepatitis A Shot
Black pants and black (non-skid) shoes
$15.00 SkillsUSA yearly membership dues

Employment Outlook
Employment of meeting, convention, and event planners is projected to grow 10 percent from 2014 to 2024. The median annual wage for meeting, convention, and event planners was $46,840 in May 2015.

Certifications / Credentials
• ServSafe – Professional Food Handlers Certificate
• Technical Skills Attainment Certificate

Post-Secondary Credit
• Dual Credit Agreements – St. Louis Community College
• Articulation Agreement – St. Louis Community College

Employment Opportunities
• Travel Agent
• Hotel Resort Manager
• Event / Convention Planner

Student Organization(s)
• SkillsUSA

Off-Campus Programs
• Internships – Y
• Externships – Y
• Job Shadowing – Y
Law Enforcement

The program is designed for 11th and 12th grade students interested in career occupations in law enforcement and investigative careers. The program emphasizes the criminal justice system and role of securing the safety of society. Students will receive an in-depth analysis of the American legal system and forensic evidence procedures and practices with emphasis on internships and classroom academic didactics.

Entrance Recommendations
Prerequisite: Criminal Justice

Class Requirements
Law Enforcement/Criminal Justice TSA Assessment

Employment Outlook
Between 2012 and 2022 job growth will average roughly 12% per year for all protection services, law enforcement and criminal justice occupations.
Manufacturing Engineering

This pathway is designed to build a strong foundation in the field of automated manufacturing. Students will be provided extensive hands-on experience with Computer Numerically Controlled (CNC) lathes and mills, as well as robots, Computer Integrated Manufacturing (CIM) and welding processes.

Entrance Recommendations
Recommended GPA: 2.5 or higher
Recommended Courses: Geometry and Algebra
90% Daily attendance expected

Class Requirements
Engineering Notebook
Flash Drive

Employment Outlook
Employment of machinists and tool and die makers is projected to grow 6 percent from 2014 to 2024. The median annual wage for machinists and tool and die makers was $42,110 in May 2015.
Marketing

This pathway is for students who are preparing for a career in the field of marketing and/or management. Instruction will prepare students to perform one or more of the marketing functions: selling, buying, pricing, promoting, market research, management and an orientation to the American free enterprise system. The program utilizes DECA and the Marketing education internship to support classroom instruction.

Entrance Recommendations
Pre-requisite: Introduction to Business
Recommended GPA: 2.0 or higher
90% Attendance is recommended

Class Requirements
Assessment of Skills and Knowledge (ASK) for Marketing
DECA membership
Internship Participation

Employment Outlook
Employment of market research analysts is projected to grow 19 percent from 2014 to 2024. The median annual wage for market research analysts was $62,150 in May 2015.
Multimedia

This pathway is designed for students interested in developing skills in computer-based Digital-multimedia techniques. It includes an overview of desktop publishing, computer graphics, digital imaging, Web design photography, 2D and 3D animation, audio and, video technology, html techniques and gaming. Students will also develop advanced work in animation, video editing, production and postproduction techniques.

Entrance Recommendations
Must be in the 11th and 12th grade. Successful completion of Introduction to Business is recommended. Student must earn a ‘B’ Grade at the Intro level in order to qualify for the Advanced class.

Class Requirements
Students must successfully pass the Technical Skills Assessment and demonstrate basic knowledge of multimedia content authoring with an emphasis on graphic design, animation, video editing, production and postproduction techniques.

Employment Outlook
Employment of multimedia designers and animators is projected to grow 6 percent from 2014 to 2024, about as fast as the average for all occupations.
Project Lead the Way - Biomedical Sciences

Through a sequence of courses that include Human Body Systems and Biomedical Innovation, PLTW Biomedical Science students grades 9-12 tackle challenges and step into roles of medical investigators, surgeons, microbiologists, geneticists, and biomedical engineers. They explore realistic situations like investigating the death of a fictional person and analyzing prevention, diagnosis, and treatment of disease.

Entrance Recommendations
9th Grade

Class Requirements
Maintain a Biomedical Science Journal
Take PLTW end of course (EOC) test to receive credit

Employment Outlook
Employment of medical scientists is projected to grow 8 percent from 2014 to 2024, about as fast as the average for all occupations.

Pathway Courses
- PLTW Principles of Biomedical Science
- PLTW Human Body Systems
- PLTW Medical Interventions
- PLTW Biomedical Innovation

Post-Secondary Credit
- Dual Credit Agreements-St. Louis Community College
- Articulation Agreements-St. Louis Community College

Employment Opportunities
- Biomedical Scientist
- Forensic Scientist
- Microbiologist
- Healthcare Scientist

Student Organization(s)
- HOSA - Health Occupations Students of America

Off-Campus Programs
- Internships-Y
- Externships – Y
- Job Shadowing – Y
Project Lead the Way Engineering

Project Lead the Way (PLTW) Pathway to Engineering (PTE) is a four-year high school sequence taught in conjunction with traditional math and science courses. PTE’s courses, including Digital Electronics and Civil Engineering/Architecture, provide students with in-depth, hands-on knowledge of engineering and technology-based careers.

Entrance Recommendations
GPA Recommendation: 3.0 or higher in math & science
Enrolled in Algebra and Physics

Class Requirements
Maintain an Engineering Notebook
Take PLTW end of course (EOC) test to receive credit

Employment Outlook
Employment of electrical and electronics engineers is projected to show little or no change from 2014 to 2024. The median annual wage for electrical and electronics engineers was $95,230 in May 2015.

Employment of civil engineers is projected to grow 8 percent from 2014 to 2024. The median annual wage for civil engineers was $82,220 in May 2015.

Pathway Courses
- PLTW Introduction to Engineering Design (IED)
- PLTW Principles of Engineering (POE)
- PLTW Digital Electronics (DE)
- PLTW Civil Engineering & Architecture (CEA)
- PLTW Engineering Design & Development (EDD)

Post-Secondary Credit
- Dual Credit Agreement – St. Louis Community College
- Articulation Agreement – St. Louis Community College

Employment Opportunities
- Electrical Engineer
- Civil Engineer
- Mechanical Engineer

Student Organization(s)
- SkillsUSA
- TSA – Technology Student Assoc.
- First Robotics

Off-Campus Programs
- Externships – Y
- Job Shadowing – Y
Pre-Veterinary Science

This pathway provides an introduction into the exciting field of Animal Health Care and Management, which can prepare students for a wide array of careers working with animals. Students should have a passion for animal health and providing a key service to their community by maintain healthy animal populations.

Entrance Recommendations
90% daily attendance expected
Recommended Courses: Advanced Biology and/or Anatomy/Physiology

Class Requirements
Royal blue scrubs
Closed toe, non-slip shoes

Employment Outlook
Employment of veterinary technologists and technicians is projected to grow 19 percent from 2014 to 2024. The median annual wage for veterinary technologists and technicians was $31,800 in May 2015.

Pathway Courses
- Pre-Veterinary Science Theory, Practice & Skills Development
- Pre-Veterinary Science Advanced Topics
- Internship

Certifications / Credentials
- Technical Skills Attainment Certificate

Post-Secondary Credit
- Articulation Agreement – St. Petersburg College of Veterinary Technology

Employment Opportunities
- Veterinary Technician
- Shelter Manager
- Dog Groomer

Student Organization(s)
- FFA - Future Farmers of America

Off-Campus Programs
- Internships – Y
Rehab Therapy

The Rehabilitation Therapy/ Sports Medicine pathway provides instruction in those clinical skills needed for entry level employment in the rehabilitation therapy area. This course will also include extensive study in the area of Sports Medicine and personal training. Students who qualify in terms of knowledge, skills and attitude, will be placed in an off-campus internship with one of several cooperating health care institutions.

Entrance Recommendations
11th and 12th Grade
Recommended GPA: 2.5 or higher
Recommended Courses: Algebra, Chemistry, and /or Anatomy/Physiology

Class Requirements
Students must successfully pass the NOCTI test and demonstrate basic knowledge of health assisting.

Employment Outlook
Employment of physical therapist assistants and aides is projected to grow 40 percent from 2014 to 2024. The median annual wage for physical therapist assistants and aides was $42,980 in May 2015.
Respiratory Therapy

This pathway introduces students to core health care competencies for respiratory therapy. The course includes instruction in respiratory therapy and education program options; communication and interpersonal skills; legal and ethical responsibilities of health care professionals; computer technology and mathematic calculations; diseases and wellness; respiratory therapy equipment, safety and procedures, and infection control.

Entrance Recommendations
Must be in the 11th or 12th grade
GPA Recommendation: 2.5 or higher
Recommended Courses: Algebra, Biology, and/or Anatomy/Physiology.

Class Requirements
Hospital Uniform; Tennis Shoes; Wrist Watch

Employment Outlook
Employment of respiratory therapists is projected to grow 12 percent from 2014 to 2024. The median annual wage for respiratory therapists was $57,790 in May 2015.
Robotics

This pathway introduces students to robots and robotics. It will also introduce students to the many pieces that make up robots both for instruction and competition through student organizations. Students will build a solid foundation in robotics by: building and programming their own robot; gaining hands-on knowledge about physics, technology, engineering and math while using their robot; and completing a capstone project that challenges the student to solve a real life problem.

Entrance Requirements
Successful completion of Algebra 150

Class Requirements
Must keep an Engineering notebook

Employment Outlook
Employment of mechanical engineers is projected to grow 5 percent from 2014 to 2024. The median annual wage for mechanical engineers was $83,590 in May 2015.
Television Production

This pathway involves advanced TV production techniques (studio and field production) lighting techniques, set design, and advanced editing. Students will write and produce individual projects, video yearbooks, and videotapes of activities/performances throughout the school year. Advanced students will be responsible for post-production activities, such as editing, of a weekly TV program.

Entrance Recommendations
11th and 12th grade
Recommended GPA: 2.0 or higher

Class Requirements
Students must successfully pass the NOCTI test and demonstrate a basic knowledge of television pre-production, production and post-production skills.

Employment Outlook
Employment of broadcast and sound engineering technicians is projected to grow 7 percent from 2014 to 2024. The median annual wage for broadcast and sound engineering technicians was $41,780 in May 2015.
Dr. Elizabeth Bender
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Dr. Kelvin Adams
Superintendent of Schools

Special Thanks:
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