CAREER ACADEMIES

Academies are a new addition to the program offerings available to all qualified high school students starting with the 2012-2013 school year. Academy participants will prepare for a wide-variety of career paths as they complete select programs of study. Additionally, successful program completers will benefit from earned college credit and a diploma endorsement verifying the high level of achievement and career preparation.

All Academies are New York State Education Department approved Career & Technical Education (CTE) programs *(certain approvals may be pending at time of publication.)* In addition to receiving a CTE diploma endorsement, CTE program participants benefit from the ability to earn integrated high school credit, meet particular graduation requirements though alternative means, and will participate in a variety of internships or other forms of career exploration.

Career & Technical Education program participants have the opportunity to earn mathematics, science, social studies, art, and LOTE (foreign language) credit through Academy courses and program sequences. See separate Academy publications or your guidance counselor for specifics related to graduation requirements.

The following Academies are available to all incoming freshman and current high school students that qualify:

> ➢ Computer Networking & Technology Academy
> ➢ Information Technology Academy
> ➢ Pre-Engineering Academy
> ➢ Virtual Enterprise/Finance Academy

For more information: www.ktufsd.org/academies

Computer Networking & Technology Academy

Students interested in computer hardware and software, computer networking, and technology in general will benefit from the Computer Networking & Technology Academy. Learning takes place through hands-on instruction in the District's state-of-the-art Technology labs. Topics covered include *Cisco* networking, digital electronics, automation, robotics, three-dimensional modeling, and rapid prototyping. Program completers have the opportunity to earn *Cisco Computer Networking Associate (CCNA)* certification.

Computer Networking & Technology Academy participants will enroll in the following courses while completing all graduation requirements:

PLTW Introduction to Engineering Design/DDP (IED/DDP)
Computer Networking 1 & 2
PLTW Computer Integrated Manufacturing (CIM)
PLTW Digital Electronics (DE)
PLTW Engineering Design and Development (EDD)

See *Engineering &Technology Education* section for course descriptions.

Information Technology Academy

Our rapidly evolving world relies heavily on the collection and distribution of digital information. From education to business to the consumer market, our society depends on our ability to access a wide variety of data. The Information Technology Academy will prepare students for future careers in the IT industry. Program completers may choose to continue training with enrollment in two or four-year colleges or may go directly to entry-level careers in a wide variety of fields.

The course of study for Information Technology students includes:

> PLTW Introduction to Engineering Design/DDP
> Computers and the Internet
> Computer Networking 1 & 2
> Web Design 1 & 2
> Computer Fundamentals
> Financial Literacy

Pre-Engineering Academy

The Pre-Engineering Academy includes the Project Lead the way (PLTW) Pathway to Engineering Program. This program is a hands-on and project-based sequence of study that engages students in a real-world learning environment. Students explore science, technology, engineering, and mathematics (STEMs) in a unique, nontraditional manner that allows students to not only see concepts on paper, but learn through experience and experimentation. Exciting experiences include: automation, robotics, rapid prototyping, three-dimensional modeling, materials testing, electronics, and architectural design. The Pre-Engineering Academy sequence of courses concludes with a capstone design project that allows students the opportunity to work with educators and representatives of industry to design, build, and market a unique invention exhibiting learning that took place in this program.

Pre-Engineering Academy participants will complete the following courses with electives while completing all high school graduation requirements:

> PLTW Introduction to Engineering Design/DDP (IED/DDP)
> PLTW Computer Integrated Manufacturing (CIM)
> PLTW Principles of Engineering (POE)
> PLTW Digital Electronics (DE)
> PLTW Engineering Design & Development (EDD)
> Architecture or PLTW Computer Science Principles (AP CSP)

See *Engineering &Technology Education* section for course descriptions.

Virtual Enterprise & Finance Academy

The mission of the Virtual Enterprise & Finance Academy is to provide students with a challenging, student-centered, project-based academic, business/financial and technology program. Students will be exposed to the global business world and will be inspired to become respectful and successful members of a continually evolving financial community. Students will participate in mentoring, job shadowing, community service and paid internships.

Students who participate in this career-preparation academy will be developing and learning the skills necessary to be successful in today's financial world. This program focuses on preparing students for a variety of careers that are (or will) be available to high school and college graduates in the coming years. The Virtual Enterprise & Finance Academy includes the following courses:

> Computers and the Internet
> Web Design 1 & 2
> Virtual Enterprise
> Business Law
> Financial Literacy
> Accounting 1
> Internship

See the *Business/Marketing and Computer* section for course descriptions.

Academy Requirements

Academy enrollment is open to all incoming high school freshman. Additionally, current high school students may also enroll provided they have the time and opportunity to meet all Academy course requirements.

Academy participants must:

- ✓ Be motivated to pursue career preparation in one of the available programs.
- ✓ Complete all courses in the prescribed program of study.
- ✓ Meet all graduation requirements including earning at least the minimum number of units of credits.
- ✓ Participate in a variety of work-based learning opportunities.
- ✓ Complete an employability profile.
- ✓ Pass an industry standard assessment.

Work-Based Learning (WBL)

All Academy students must complete a Work-Based Learning (WBL) experience through completion of either Internship or *Career Planning & Exploration* course.

Academy Requirements

Academy enrollment is open to all incoming high school freshman. Additionally, current high school students may also enroll provided they have the time and opportunity to meet all specific Academy course requirements.

Academy participants must:

- ✓ Be motivated to pursue career preparation in one of the available programs.
- ✓ Complete all courses in the prescribed program of study.
- ✓ Meet all graduation requirements including earning at least the minimum number of units of credits.
- ✓ Participate in a variety of work-based learning opportunities.
- ✓ Complete an employability profile.
- ✓ Pass an industry standard assessment.