Information Design and Engineering Academy (IDEA) STEM Academy
Located at Phoebus High School, 100 Ireland Street Hampton, VA 23663 Phone 727-1000

Information Design and Engineering Academy (IDEA) STEM Academy is offered in partnership with community businesses, industry partners, and NASA. Project Lead The Way (PLTW), is a four-year, five-course computer integrated manufacturing program for students. Additionally, a two-year robotics sequence is available with Virginia Manufacturers Association curriculum and credential. Academy programs provide the core high school level academic and technical courses needed for successful transition to postsecondary education and careers in engineer, engineer technologist, or engineering technician, programming and information technology, electronic media, and graphics design. Upon high school graduation, students will have high-tech engineering and manufacturing literacy and other critical knowledge, skills, and credentials that will prepare them for high-demand, high-wage, and high-skills information design and engineering careers in Virginia.

**Engineering and Technology Pathway:** Students learn the Engineering Design Process and how technology is created. Students develop and design new products using industry-recognized design software, rapid prototyping, mechatronics, and robotics.

- **Courses include:** Engineering Design, Principles of Engineering, Digital Electronics, Computer Integrated Manufacturing, Engineering Design and Development, Technical Drawing, Electronics/Industrial Robotics Technology
- **Examples of Career Pathways:** Aeronautical/Aerospace Engineer, Application Engineer, Architectural Engineer, Automotive Engineer, CAD Technician, Computer/Hardware Engineer, Drafter, Electrical/Electronic Engineering Technician, Geothermal Engineer, Industrial Engineer/Technician, Manufacturing Engineer/Technician, Marine Engineer, Metallurgist, Product/Process Engineer, Survey Technician, Systems Engineer, Transportation Engineer

**Information Technology and Design (Support and Services) Pathway:** Students learn to create a story line for a video game, how to create web page, basic animation techniques, and how a computer works.

- **Courses include:** IT Fundamentals, Programming, Design/Multimedia/Web Technologies, Computer Networking, And Advanced Programming
- **Examples of Career Pathways:** Account Manager, Applications Integrator, Call Center Support Representative, Data Systems Designer, Database Analyst, E-Business Specialist, Help Desk Specialist, Information Systems Architect, Instructional Designer, Maintenance Technician, PC Support Specialist, PC Systems Coordinator, Project Support Engineer, Systems Analyst, Technical Communicator, Testing Engineer

**Media and Technology & Design (Audio/Video Technology and Film) Pathway:** Students learn design basics in photography, Photoshop, and video editing using industry-standard video and audio editing programs. Students learn basic writing, directing, acting, and editing of high definition camera work to create professional videos.

- **Courses include:** Communications Systems, Imaging Technology, Video and Media Technology, Modeling and Simulation Technology, Digital Visualization, Journalism, Public Speaking, Acting, Technical Drama, Fashion Marketing, Sports and Entertainment Marketing
- **Examples of Career Pathways:** Audio System Technician, Audio-Video Designer and Engineer, Audio-Video System Service Technician, Technical Computer Support Technician – Film, Video, and DVD, Videographer – Special Effects and Animation, Video Systems Technician, Animator, Film Editor