

# Career and Technical Education

## The Workplace of Today

According to Virginia's employers, today's workplace trends include:

- Employers feel that today's workers, especially at the entry level, need a greater awareness of the basic workplace value of 'a day's work for a day's pay.'
- The number of workers who use or rely on computers and computerized technology has increased dramatically, and new ways to use this technology are being found every day.
- Workers are expected to solve problems and make decisions that were formerly the province of supervisors and managers.
- Employers are demanding higher educational levels of job applicants, and more occupations are requiring licensing or certification.
- Customers and clients are demanding better service and better quality products.
- Constant change requires flexibility and adaptability, particularly in the face of cross training, the trend toward temporary work, and the competition-driven need for non-traditional work hours in service-oriented occupations.
- Constant change requires lifelong learning.

## Employers expect students to have the following "hard skills"

- ✓ **Math-** workers need to be able to do basic math, including word or work problems.
- ✓ **Writing-** the demand for workers who can write clearly has increased in almost every occupation. Writing clearly includes using correct spelling and grammar in order to convey ideas to coworkers, clients, and customers.
- ✓ **Speaking-** the ability to convey one's meaning clearly is vital to successful oral communication in both formal and informal contexts.
- ✓ **Computer Literacy-** includes knowing how computers operate and what they can do; familiarity with word processing, spreadsheet, and database software; carrying out basic hardware-related tasks; and recognizing the difference between operator error and computer caused problem.

✓ **Reasoning, problem solving and decision making** require using logic to solve problems and make decisions based on an understanding of how and why things work the way they do.

✓ **Understanding the broader picture-** in order to make intelligent decisions, employees need to understand how their work fits into the wider picture and contributes to the broader aims and goals of the organization.

**\*\* The above "hard skills" are covered in each Career and Technical Education Course under "All Aspects of Industry."**

## Employers are also looking for personal qualities- "soft skills"

- ❖ **A strong work ethic-** means good attendance, promptness, the flexibility to meet employers' changing requirements, having a positive attitude, and making an effort to do the job thoroughly and well.
- ❖ **A positive attitude-**includes cooperativeness, taking direction and correction willingly, eagerness to learn, being pleasant and polite, and in particular, getting along with others.
- ❖ **Independence and initiative-** means working without the need for constant supervision-finding things to do on one's own, making suggestions, and being interested in making things work better.
- ❖ **Self-presentation-**means making a good impression-wearing appropriate clothes, speaking well, being courteous and professional.

**\*\*The above "soft skills" are taught/reinforced in every Career and Technical Education Course as "Employability Skills."**



## The Workplace of the Coming Decade

1. **Racial and ethnic diversity will increase** bringing with it the need for higher levels of tolerance and interpersonal skills.
2. Workers will be increasingly called upon to **work independently** of supervision, and to demonstrate initiative in problem solving and decision-making.
3. **Educational requirements** for entry-level jobs will continue to rise.
4. The **increasing number of working women** brings an increasing demand for workers in jobs that serve households and families—restaurants, child care, mail order sales, and so forth.
5. In many jobs, **traditional 9 to 5 hours will cease to be the norm.**
6. **Foreign language skills will be increasingly valued** in the workplace.
7. **Opportunities will be greatest for those most willing and able to relocate**, particularly to the state’s major metropolitan areas.
8. The **increase in businesses and agencies that serve older people**, along with the need for people to work in these areas.
9. **Small employers** will continue to be a significant source of training and employment.

The above summaries of *The Workplace of Today* and *The Workplace of Coming Decades*, is taken directly from the Executive summary of Virginia’s [Changing Workplace](#).

## How Do I Earn a Career and Technical Education Seal?

- Fulfill the requirements for either a standard or advanced studies diploma
- Complete prescribed sequence of courses in a CTE concentration

- Meet one of the following conditions:
  - Maintain a B or better average in CTE courses
  - Pass an exam that confers certification from a recognized industry, trade, or professional association. For example: A+ exam for Computer Systems Technology.
  - Acquire a professional license in a CTE field for example: Cosmetology or Nursing.

## How Do I Earn an Advanced Mathematics and Technology Seal?

- Fulfill the requirements for either a standard or advanced studies diploma.
- Satisfy all mathematics requirements for the Advanced Studies Diploma (four credits including Algebra II; two verified units of credit) with a B average or better.
- Meet one of the following conditions:
  - Pass an exam that confers certification from a recognized industry, trade, or professional organization for example A+ exam for Computer Systems Technology. Certifications that meet this requirement can be found at [www.cteresource.org/jpg/amtseal.html](http://www.cteresource.org/jpg/amtseal.html).
  - Acquire a professional license in a career and technical education field from the Commonwealth of Virginia (nursing or cosmetology).
  - Pass an exam approved by the Board that confers college-level credit in a technology or computer science area:
    1. A.P. Computer Science (3 or better)
    2. A.P. Computer Science AB (3 or better)
    3. IB Computer Science (Standard Level)
    4. IB Computer Science (Higher Level)

## What is Tech Prep?

Tech Prep is a school-to-work initiative monitored by educators and members of business and industry. **The goal is to provide students with educational experiences that relate to real-world situations.**

Tech Prep is the number one school-to-work strategy in the United States and one of the country’s most important school

reforms. More than one million high school students in all 50 states are enrolled in Tech Prep Programs and thousands of employers participate in consortia nationwide.

Tech Prep is based on the idea that good technical education **combines a solid academic foundation with hands-on experiences.**

**Identified Tech Prep courses are linked to corresponding Northern Virginia Community College courses.** Linked courses:

- Allow high school students to earn college credit for courses completed in high school
- Save the student time and money
- Eliminate repetition of material already learned in high school
- Prepare students for post-high school academic and technical education

**PROGRAMS THAT HAVE ADVANCED STANDING OPPORTUNITIES THROUGH TECH PREP ARTICULATION AGREEMENTS ARE LOCATED ON THE CHARTS THAT FOLLOW THIS INTRODUCTION.**

## What is Dual Enrollment?

Dual enrollment provides a wider range of course options for high school students and avoids unnecessary duplication of programs. This plan promotes rigorous educational pursuits and encourages learning as a lifelong process; it recognizes that high school students who accrue college credit are more likely to continue with their education beyond high school than those who do not.

All high school juniors and seniors who are sixteen years of age or older are eligible to participate in the dual enrollment arrangement between the public school and the community college. However, students selected must be prepared for the demands of college level curriculum and be able to benefit from the enrichment opportunity for which they are applying. **The principal of the base school determines Initial Eligibility** one semester at a time. Students must have this approval and appropriate forms signed prior to course registration at the college.

**College credit shall be awarded** by the community college to participating high school students upon successful completion of a course. The award shall be in compliance with state and regional accrediting standards.

**High school credit shall also be awarded** to the participating high school students upon successful completion of the course. *The award shall be based on the college credit hour with one high school unit equivalent to six semester hours of college credit.* It is the student's responsibility to have the college transcript sent to the high school.

Courses are taken at the appropriate Northern Virginia Community College Campus. All students must pass any required placement tests prior to acceptance into the program.

## Sequential Electives

According to the Standards of Quality (SOQ) and beginning with the graduating class of 2003, students who plan to graduate with a Standard Diploma or a Modified Standard Diploma must complete at least two sequential electives.

Sequential electives is defined as any series of courses that are used to fulfill the elective requirements for a standard or modified standard diploma in which the content increases or expands in scope and sequence as students move through the various levels of the courses available.

The following items are to serve as guidelines for implementing this requirement:

- The requirement for students to complete two sequential electives is effective with the class of 2003.
- The two sequential electives may be in any discipline in as long as the courses are not specifically required for graduation.
- Courses used to satisfy the one unit of credit in fine or practical art required for the standard or modified standard diploma may be used to partially satisfy this requirement.
- A sequence that includes an exploratory course followed by an introductory course cannot be used to satisfy this requirement; however, an introductory course followed by another level of the same course of study can be used.
- Students may take the focused sequence of elective courses in consecutive years or any two years of high school.

**Any course listed in the Career and Technical Education section will meet the Fine and Practical Arts Requirement for Graduation. Sequential Elective options for Career and Technical Education are listed on a separate chart in this section of the course catalog.**