



**Programming and Software Development** is a program of study within the **Information Technology Career Cluster**. A Career Cluster is a grouping of occupations and broad industries based on commonalities. There are 16 Career Clusters.

Career clusters link what students learn in school with the knowledge and skills they need for success in college and careers. The Information Technology Career Cluster involves the design, development, support and management of hardware, software, multimedia, and systems integration services.

There are four programs of study in this cluster:

- Information Support and Services
- Interactive Media
- Network Systems
- Programming and Software Development

### **Employment Outlook**

A **Software Engineer** is an example of a career in this program of study. Nationally, the number of jobs for computer programmers is expected to gradually decline through the year 2016. Those with a 4-year bachelor's degree and experience in a variety of programming languages and tools should have the best jobs prospects. Those with international business experience or who know multiple languages will be highly competitive as many computer programming jobs are being outsourced overseas. Nationally, the salary range for computer programmers is \$40,080 to \$111,450 (Occupational Outlook Handbook, 2008-2009). In Texas, entry level salaries are \$62,340 (Texas Workforce Commission, 2009).

### **Using this brochure**

Inside you will find a suggested **program of study** that has lots of helpful information. The model is an example of the types of courses and extended learning experiences that are important for the **Programming and Software Development Program of Study**. Use this model to plan your course schedule, educational experiences, and career choices.

At the top of the model, you will find **career goals** with the corresponding **O\*NET code**. The O\*NET code is an official classification of jobs and can be used to locate career-related information. Your teacher, counselor, or media center should be able to help you locate further information.

The upper left side of the model highlights the **core courses and career-related electives** in high school that will help prepare you for your career goal. This model is based upon the Recommended High School Graduation Plan and can easily be adapted for the Distinguished Achievement High School Graduation Plan.

The upper right side of the model highlights examples of **extended learning experiences** that can enhance your knowledge and skills for your career goal. You will find examples of curricular activities, such as participation in Career and Technical Student Organizations like BPA or FBLA, career learning experiences, service learning activities, and extracurricular activities.

The lower left side of the model indicates **industry licensures/certifications** and **on-the-job training experiences** that may be available while still in high school. This section also highlights the various levels of **postsecondary education** and examples of **career options** available to you once you have completed that level of education and training.

The lower right side of the model contains examples of **professional associations** available for program and software development professionals. Many of these organizations allow preprofessional membership while enrolled in a postsecondary program. Most organizations have websites which can be easily located by entering the organization name in available search engines.

## Thinking about a career in Programming and Software Development?



<http://www.achievetexas.org>

This program of study may be for you! Employees in this career design and test new software programs, participate in systems integration and information security. They develop, test, and refine products that businesses and individuals will use in both the business and private sectors (Occupational Outlook Handbook, 2008-2009). Look inside to see the suggested coursework and learning opportunities that will prepare you for an exciting and rewarding career.

