The Foundations of Computer Science - TExES 241 Prep course addresses all 106 competencies in the four domains and 13 competency groups of the TExES 241 list.

In the left column are the TExES elements, on the right the corresponding Foundations units.

### TExES 241 Computer Science Competencies

#### Domain I — Technology Applications Core

| Competency 001 | The computer science teacher knows technology terminology and concepts; the appropriate use of hardware, software and digital files; and how to acquire, analyze and evaluate digital information.  |
| Competency 002 | The computer science teacher knows how to use technology tools to solve problems, evaluate results and communicate information in a variety of formats for diverse audiences.  |
| Competency 003 | The computer science teacher knows how to plan, organize, deliver and evaluate instruction that effectively utilizes current technology for teaching the Technology Applications Texas Essential Knowledge and Skills (TEKS) to all students.  |

#### Domain II — Program Design and Development

| Competency 004 | The computer science teacher knows problem-solving strategies and different procedures for program design.  |
| Competency 005 | The computer science teacher knows procedures for software development and implementation.  |
| Competency 006 | The computer science teacher knows computer science terminology and concepts and the characteristics of different programming languages and paradigms.  |

### Course Elements

- **Week 6 - Hardware, Software, Networking, Use of Electronic Resources and Internet**
- **Week 6 - Use of Application Software**
- **Week 6 - Use of Instructional Technology**
- **Week 1 - Software Design**
- **Week 1 - Software Development**
- **Week 1 - Object Oriented Programming Concepts, Programming Languages**
CROSSWALK (cont)

Domain III — Programming Language Topics

- **Competency 007**
  The computer science teacher correctly and efficiently uses data types, data structures and functions in the development of code.

- **Competency 008**
  The computer science teacher correctly and efficiently uses statements and control structures in the development of code.

- **Competency 009**
  The computer science teacher knows how to construct, compare and analyze various algorithms.

Domain IV — Specialized Topics

- **Competency 010**
  The computer science teacher knows discrete mathematics topics relevant to computer science.

- **Competency 011**
  The computer science teacher knows digital forensics topics.

- **Competency 012**
  The computer science teacher knows robotics topics.

- **Competency 013**
  The computer science teacher knows game and mobile application development topics.