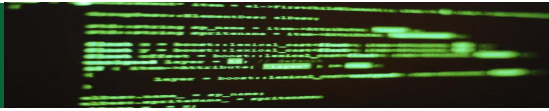


# Science, Technology, Engineering, and Mathematics Career Cluster

The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing, scientific research and professional and technical services, including laboratory and testing services, and research and development services.

## Program: Programming and Software Development Statewide Program of Study



The Programming and Software Development program of study explores the occupations and education opportunities associated with researching, designing, developing, and testing operating systems-level software, compilers, and network distribution software for medical, industrial, military, communications, aerospace, business, scientific, and general computer applications. This program of study may also include exploration into creating, modifying, and testing the codes, forms, and script that allow computer applications to run.

### Secondary Courses for High School Credit

#### Level 2

- AP Computer Science Principles – LOTE Credit & Weighted
  - 1 Semester at Ben Barber
  - 1266CT/9-12
- Computer Science I – LOTE Credit
  - 1 Semester at Ben Barber
  - 1050CT/9-12
  - **Prerequisites: Algebra I**

#### Level 3

- AP Computer Science A – Math/LOTE Credit & Weighted
  - 2 Semesters at Ben Barber
  - 1055CA-CB/10-12
  - **Prerequisites: AP Computer Science Principles**
- Computer Science II – LOTE Credit
  - 1 Semester at Ben Barber
  - 1051CT/9-12
  - **Prerequisites: Computer Science I**
- Mobile Applications Development
  - 1 Semester at Ben Barber
  - 1052CT/9-12
  - **Prerequisites: Algebra I AND Computer Science I**

#### Level 4

- Practicum in STEM
  - 2 Semesters at Ben Barber
  - 1857CA-CB/12 Only
  - Selection Process
- Practicum in Information Technology
  - 2 Semesters at Ben Barber
  - 1851CA-CB/11-12
  - Selection Process

### Roadmap to Completer

Levels	Courses			
Level 1	No courses offered at Level 1 in this program of study			
Level 2	1266CT AP Computer Science Principles (1 Credit)		1050CT Computer Science I (1 Credit)	
Level 3	1055CA-CB AP Computer Science A (2 Credits)	1051CT Computer Science II (1 Credit)	1052CT Mobile Applications Development (1 Credits)	
Level 4	1857CA-CB Practicum in STEM (2 Credits) <i>Students must successfully complete a level 1 or 2 course AND a level 3 or 4 course to take a practicum course</i>		1851CA-CB Practicum in Information Technology (2 Credits) <i>Students must successfully complete a level 1 or 2 course AND a level 3 or 4 course to take a practicum course</i>	
	1 Semester Home Campus	2 Semester Home Campus	1 Semester Ben Barber	2 Semesters Ben Barber
				Ben Barber or HC

- Failure to follow the sequence of courses in the Roadmap to Completer could result in a student not meeting standards to be a CTE Completer in the program of study.
- Students without their own transportation may not be able to participate in a practicum course.
- Successful completion of the Programming and Software Development program of study will fulfill requirements of the STEM and Business & Industry endorsement.