

North Carolina Career Cluster

Science, Technology, Engineering and Mathematics

Related Pathways

Engineering and Technology
Science and Mathematics

CTE Program Areas	CONCENTRATION (Four total credits required)	
	Foundational Courses	Career Cluster Enhancement Courses
BUSINESS AND INFORMATION TECHNOLOGY EDUCATION		6411 Computer Applications I 6514 Digital Communications Systems
CAREER DEVELOPMENT		6145 Career Management
TECHNOLOGY EDUCATION	8005* Technology Advanced Studies 7901/8006 Scientific & Technical Visualization I 7902/8007* Scientific & Technical Visualization II 8011 Principles of Technology I 8012* Principles of Technology II 8017 Physical Science/Principles of Technology I 8018* Physics/Principles of Technology II 8110 Fundamentals of Technology 8115* Manufacturing Systems 8125* Communication Systems 8126* Transportation Systems 8141* Structural Systems	8196 Technology Education Department of Labor Registered Apprenticeship Project Lead the Way (PLTW) 8020 PLTW Introduction to Engineering Design 8021 PLTW Principles of Engineering 8022 PLTW Digital Electronics 8030 PLTW Computer Integrated Manufacturing 8031 PLTW Civil Engineering & Architecture 8032 PLTW Biotechnical Engineering 8033 PLTW Aerospace Engineering 8040 PLTW Engineering Design & Development
TRADE AND INDUSTRIAL EDUCATION	7400 Introduction to Trade & Industrial Education 7631 Electronics I 7632* Electronics II 7821 Trade & Industrial Cooperative Training I 7921 Drafting I 7972* Drafting – Engineering II 7973 Drafting – Engineering III	7980 Networking I 7981 Network Engineering Technology I 7991 Computer Engineering Technology I 7996 Trade & Industrial Education Department of Labor Registered Apprenticeship 7997 Trade & Industrial Education Cooperative Education 7999* Trade & Industrial Education Advanced Studies
		6411 Computer Applications I 6514 Digital Communications Systems 6145 Career Management 8998 University – Technology Education 8999 Community College – Technology Education 8198 Technology Education Internship 7898 University – Trade & Industrial Education 7899 Community College – Trade & Industrial Education 7935 Digital Media I 7998 Trade & Industrial Education Internship

To earn a concentration for graduation and CTE federal reporting purposes:

- The student must take at least four technical credits from among the courses listed in the Career Cluster.
- At least three of the technical credits must come from among the Foundational courses listed .
- At least one of the Foundational courses must be at the completer level, identified by an asterisk on the chart above.
- The fourth technical credit can be either a Foundational or Enhancement course.
- Enhancement courses can be from any program area identified in the Career Cluster.

