Educational Plan
A.3.2 Course Offerings and Graduation Requirements

This Applicant will serve any grade 9 or above and will c*omplete this section.*

Course Offerings and Graduation Requirements

ECA will follow a plan for all high school students which meet the graduation requirements set forth by the State of Arizona, as outlined in Arizona Administrative Code R7-2-302.02.

English	Math	Science	Social Studies	CTE and Electives
4 credits	4 credits	3 credits	3 credits	1 credit / 7 credits
Total 22 credits				

- Math courses shall consist of Algebra I, Geometry, Algebra II and statistics
- Three credits of science in preparation for proficiency at the high school level on the Arizona's Instrument to Measure Standards (AIMS) test, or other State required exam
- Social Studies shall consist of one credit of American History, one credit of World History, one-half credit of government and one-half credit of economics
- Passing score on the reading, mathematics, science and writing portions of the AIMS (Arizona's Instrument to Measure Standards) or new assessments as required

Process and Criteria for Awarding Course Credit

Students demonstrate mastery of standards through summative assessments measuring their understanding of each learning goal. Course objectives are provided to students for each course. Each course is divided into units with each unit having both learning outcomes and graded assignments. Depending on the course, graded assignments include projects, quizzes, exams, problem sets, and labs. Course grades are a composite of the students graded assignments with each assignment weighted differently based on the course content. State assessments, per statute, may be included in course grades, where applicable.

To insure uniform grading of qualitative or subjective work, rubrics are created to assist teachers and to standardize level of achievement.

During the trimester, if adequate student progress is not being made, students participate in supplemental learning with the teacher. Students are able to receive individual or small group instruction for topics that are more challenging for them. Students are selected or self-select for supplemental instruction based on formative assessments conducted by teachers in the classroom. As a group, Teachers discuss student progress weekly and, if needed, confer with the Executive Director, guidance counselor and parents as necessary. Supplemental learning success is gauged by summative assessments at the unit level.

The following is a list of possible grades that a student may receive for a course, the points that each grade will contribute per course credit hour to the student's grade point average and the corresponding level of mastery:

Grade Earned		Percentage Correct	Rubric Level	
A	(4.0)	90–100%	4	Advanced
B+	(3.5)	85–89%	3	Proficient
B	(3.0)	80–84%		
C+	(2.5)	75–79%	2	Basic
C	(2.0)	70–74%		
D+	(1.5)	65–69%	1	Novice
D	(1.0)	60–64%		
F	(0.0)	<60%	0	-

Course credit is awarded to students that receive a grade of C or better.

ECA's plan for monitoring and documenting student proficiency as outlined in Strategy III of the PMP is consistent with the awarding of course credit and the graduation requirements.

Course Offerings

The table below shows the curriculum pathway for ECA students. Students select one of two pathways when they enroll, either Software Development or Network Systems Administration. Over two academic years, which is six trimesters; students take core courses and select electives and upon completion have earned a high school diploma and an associate's degree

Early Career Academy						
Concentration: Software Development				**Concentration:** Network Systems Administration		
Arizona High School Graduation Plan (22 credit hours)						
SECONDARY	**Grade**	**English**	**Math**	**Science**	**Social Studies**	**Career & Technology Education Courses**
	9	English 9 (1)	Algebra I (1)	Biology (1)	American History including AZ History (1)	
	10	English 10 (1)	Geometry (1)	Chemistry (1)	World History/Geography (1)	
	11	Composition (1)	Algebra II (1)	Physics (1)	Economics (.5) US Government including AZ Government (.5)	See Concentration Courses (Below)

	12	World Literature (.5), Communications (.5)	Probability and Statistics (1)		Group Theory (Topics in Sociology) (.5)	See Concentration Courses (Below)

Electives: Program of Study Courses; Students Pick a Track and Take All Courses	
Software Development Technology	**Network Systems Administration**
Strategies for the Technical Professional Computer Structure and Logic Introduction to Programming Introduction to Application Design and Development Creating Websites Using HTML and CSS Creating Websites Using HTML5, CSS3 and JavaScript Introduction to Java Programming Introduction to Mobile Operating Systems Introduction to Database and XML with jQuery Application Development Using Java I Application Development Using Java II Social Networking Applications and Technology Software Development Capstone Project Advanced Strategies for the Technical Professional	Strategies for the Technical Professional Computer Structure and Logic Introduction to Networking Client-Server Networking I Physical Networking Client-Server Networking II Linux Networking Introduction to Information Security IP Networking Email and Web Services Network Systems Administration Capstone Project Introduction to Programming Database Concepts Advanced Strategies for the Technical Professional

Each concentration course is .5 credits.

ECA is an 11th and 12th grade high school. Students that enroll that may need a course normally taught in a previous grade, such has biology or Algebra I, will take that course at ECA. The Arizona Common Core standards and the requirements for obtaining an associate's degree form the basis for ECA courses. The ECA course descriptions are listed below.

English Language Arts courses align to the Common Core State Standards. Students will be able to receive college credit from ITT Tech for the completion of the majority of courses taken in 11th and 12th grade. A select list of course descriptions follow.

English/Language Arts I (9th grade)
This course builds upon students' prior knowledge of grammar, vocabulary, word usage, and the mechanics of writing and usually include the four aspects of language use: reading, writing, speaking, and listening.

English/Language Arts II (10th grade)
This course focuses on composition and literature. Students write persuasive, critical, and creative multi-paragraph essays and compositions. Students explore various genres of literature.

Composition
This course examines phases of the writing process, with emphasis on the structure of writing and techniques for communicating clearly, precisely and persuasively with emphasis on rhetorical structures, argumentation and research.

Communications
This course focuses on the history, principles and techniques of interpersonal, organizational and mass communications, and on communicating using written, verbal and visual formats.

World Literature
This courses uses literature selections from ancient and/or modern times from countries around the world. Students improve their critical-thinking skills as they comprehend the diversity of literary traditions and the influences of those traditions. Oral discussion is an integral part of literature courses, and written compositions are often required.

Mathematics courses align to the Common Core State Standards. Students will be able to receive college credit from ITT Tech for the completion of the majority of courses taken in 11th and 12th grade.
Algebra I
This course includes the study of properties and operations of the real number system; evaluating rational algebraic expressions; solving and graphing first degree equations and inequalities; translating word problems into equations; operations with and factoring of polynomials; and solving simple quadratic equations.
Geometry
This course covers properties of plane and solid figures; deductive methods of reasoning and use of logic; the study of postulates, theorems, and formal proofs; concepts of congruence, similarity, parallelism, perpendicularity, and proportion; and rules of angle measurement in triangles.
Algebra II
This course will include, but is not limited to, the following concepts: quadratic, polynomial and radical equations, linear functions and their graphs, systems of linear equations, functions and their properties and triangles and trigonometric functions. Additionally, this course will include the following concepts: exponential and logarithmic equations and functions, graphs of trigonometric functions, trigonometric equations, polar coordinates, oblique triangles, vectors and sequences.
Probability and Statistics
Course topics include basic probability and statistics: discrete probability theory, odds and probabilities, probability trees, populations and samples, frequency tables, measures of central tendency, and presentation of data (including graphs). Course topics may also include normal distribution and measures of variability.

Science courses align to the Common Core State Standards. Students will be able to receive college credit from ITT Tech for the completion of the majority of courses taken in 11th and 12th grade. A select list of course descriptions follow.
Biology
The course provides information regarding the fundamental concepts of life and life processes. The course includes cell structure and function, general plant and animal physiology, genetics, and taxonomy.
Chemistry
The course explores such concepts as the behaviors of solids, liquids, and gases; acid/base and oxidation/reduction reactions; and atomic structure. Chemical formulas and equations and nuclear reactions are also studied.
Physics
This course introduces students to the principles of general physics. Practical applications demonstrate the theory. This course includes a laboratory component.

Social Studies courses align to the Common Core State Standards. Students will be able to receive college credit from ITT Tech for the completion of the majority of courses taken in 11th and 12th grade. A select list of course descriptions follow.
American History including AZ History
This course provides students with an overview of the history of the United States. Course content includes the history of the Arizona.
American Government
This course examines principles and theory related to the United States federal government, including the development and foundations of the U.S. Constitution, the organization and function of the federal government including the legislative, executive and judicial branches, political parties, the electoral process, and the relationship between states and the federal government.

World History/Geography
This course provides an overview of world history and world geography.
Economics
This course introduces basic principles of both microeconomics and macroeconomics. Economic principles are presented in formal theoretical contexts and applied contexts.
Group Theory – (Topics in Sociology)
This course is an overview of the theory related to groups of people bonded by task or culture. Emphasis is on communication, critical thinking and group process theory, including social exchange theory, structuration theory, functional theory, group ethics, diversity and related communication conflicts, group decision-making, creativity, leadership and gender.

Career and Technical Education courses align to the Arizona State Course Catalog with SCED mapping. Students will be able to receive college credit from ITT Tech for the completion of the majority of courses taken in 11th and 12th grade. A select list of course descriptions follow.
Computer Structure and Logic
Organization of a computer is examined in a given popular operating systems environment. Terminology and underlying principles related to the major computer functions will be discussed in the context of hardware and software environments.
Introduction to Programming
This course serves as a foundation for understanding the logical function and process of computer programming. Basic computer programming knowledge and skills in logic and generic syntax are studied. Coding convention and procedures are discussed relevant to the given programming language environment.
Introduction to Application Design and Development
This course serves as a foundation for students pursuing knowledge and skills in computer networking technologies. Major concepts such as OSI and TCP/IP models, LAN/WAN protocols, network devices and their functions, topologies and capabilities will be discussed.
Creating Websites Using HTML and CSS
This course examines the functions of Websites for mobile and desktop devices and entry-level skills used to create such sites using HTML and CSS (Cascading Style Sheets) technologies.
Creating Websites Using HTML5, CSS3 and JavaScript
This course introduces techniques used in building interactive Websites for mobile and desktop devices, using technologies such as HTML5, CSS3 and JavaScript.
Introduction to Java Programming
This course introduces fundamentals of programming using Java and associated development tools and environments.
Introduction to Mobile Operating Systems
This course provides an overview of mobile operating systems, such as iOS, Android and Windows Mobile. Topics include architecture, functions and the impact on application development in each operating system.
Introduction to Database and XML with jQuery
This course introduces fundamental concepts of database technology and applications. Topics include object-oriented relational databases, database management systems, and using SQL, XML and jQuery to build databases that interact with applications.
Application Development Using Java I
This course introduces basic techniques used to develop applications using Java.
Application Development Using Java II
This course examines intermediate-level development techniques for applications running in the Android operating system environment. Focus is on applications interacting with Websites for mobile devices.
Social Networking Applications and Technology
This course examines a variety of social networking platforms, media, methods, tools and applications running on desktop and mobile devices. Topics include analysis of technical features and capabilities of social networking applications and the impact on consumer behavior and the global economy.
Software Development Capstone Project

This course provides the opportunity for students to use knowledge and skills acquired in the program of study to research, design, develop and promote a desktop or mobile application.

Introduction to Networking

This course serves as a foundation for students pursuing knowledge and skills in computer networking technologies. Major concepts such as OSI and TCP/IP models, LAN/WAN protocols, network devices and their functions, topologies and capabilities will be discussed. Industry standards and a brief historical development of major networking technologies will be surveyed in conjunction with basic awareness of software and hardware components used in typical networking and internetworking environments.

Client-Server Networking I

This course introduces operating principles for the client-server based networking systems. Students will examine processes and procedures involving the installation, configuration, maintenance, troubleshooting and routine administrative tasks of popular desktop operating system(s) for standalone and network client computers, and related aspects of typical network server functions.

Physical Networking

This course examines industry standards and practices involving the physical components of networking technologies (such as wiring standards and practices, various media and interconnection components), networking devices and their specifications and functions. Students will practice designing physical network solutions based on appropriate capacity planning and implementing various installations, testing and troubleshooting techniques for a computer network.

NT1330 Client-Server Networking II

The typical network server operating system and its functions are the focus of this course. Areas of study include installation, configuration, maintenance and routine administrative tasks of the network services provided by the server in relation to its clients and other servers.

Linux Networking

This course covers system and network administrative tasks associated to Linux-based components on a network. Routine tasks in installation, configuration, maintenance, and troubleshooting of Linux workstations and servers will be discussed with emphasis on the network services provided by open source solutions.

Introduction to Information Security

This course provides an overview of security challenges and strategies of counter measures in the information systems environment. Topics include definitions of terms, concepts, elements and goals incorporating industry standards and practices with a focus on availability, vulnerability, integrity and confidentiality aspects of information systems.

IP Networking

This course explores network design and implementation by applying the TCP/IP protocols to provide connectivity and associated services. Planning and deployment of network addressing structures, as well as router and switch configurations, are also examined.

Email and Web Services

This course explores common network-based services such as Web services, email and FTP in a given server operating systems environment. Related security issues will also be studied.

Network Systems Administration Capstone

This course provides an opportunity for students to work on a comprehensive project that includes the design, planning and implementation of a network solution for solving specific business problems. Common project management processes are applied to identify deliverables and outcomes of the project.

Database Concepts

This course introduces the basic concepts in databases and their applications. Topics include database history, structure, objects, relational database management systems (RDBMS), and introductory Structured Query Language (SQL).

The business plan and budget contain all resources necessary to deliver the program of instruction.