

JUNIOR YEAR CREDITS

	Credits at ACE*	Credits at Resident School	Credits at Resident School
		<i>Regular</i>	<i>Advanced & AP</i>
Science	.5 - Integrated Design and Construction Science I	-	1 – AP Science
Math	.5 - Technical Design & Construction Math I	-	1 - Algebra II, Pre Calc or Advanced Math
English	1 – Communication Skills I	-	
CTE	2 – Architecture I, Construction and Trades I, or Engineering I	-	-
Social Studies	-	1 - . Jr. level offerings (US History)	1 - Jr. Offerings AP or Honors
Electives	-	<i>As needed or desired</i>	-
Foreign Language	-	1- Spanish (or other Foreign language)	1 - Honors Spanish (or other Foreign language)
Physical Education	-	1- General Health	-
Totals	4 credits earned per year attending every other day	3 credits earned attending every other day, (4 cr. w/ elective)	4 credits earned attending very other day

* ACE is designed as a two-year program. Credits will be earned using a “credit by proficiency” system. That means that students will earn credit based on demonstrated proficiencies and subject areas are not independent or isolated from each other. Content may not be delivered in a traditional classroom setting and instruction and evaluation of learning will be done within a two-year context. Students who start with ACE in their Junior year will be expected to complete the two-year experience.

JUNIOR YEAR COURSE DESCRIPTIONS

	Course Descriptions
Science	Integrated Design and Construction Science I will include applications of biology, chemistry, physics as well as environmental, life and earth sciences to study energy, heat, weather, sustainability, material properties and scientific inquiry.
Math	Technical Design and Construction Math I will include advanced applications of elements of measurements, fractions, shape, volume and weight in the disciplines of algebra, geometry and trigonometry.
English	Communication Skills I will give students the practical and technical reading, writing, research and presentation skills necessary to be successful in the design and build industry. Students will learn to demonstrate that they can read and evaluate technical and general information in the Architecture, Construction and Engineering fields and express and write expository and persuasive papers relevant to the industry and success in life. Students will use a variety of documents including professional and literary resources.
CTE: Architecture	Architecture I will explore architecture using the Chicago Architecture Foundation's text. Students will study concepts such as plan, site, elevation, building selection and design as well as learn the basics of CAD. Students will understand the relationship and role of an architect in the design and build industry.
CTE: Construction	Construction and Trades I will include an introduction and overview of seventeen professions in the construction trades. Students will learn about the working conditions, career paths, training and employment outlook for featured each trade. A key element of the course will cover workplace safety including elevated work and fall protection, electrical hazards, construction health, lock/tag out, material handling and emergency response. The course will meet the OSHA-10 standards and students who pass the course will become OSHA-certified. Construction students will receive specialized training in the carpentry, electrical, sheet metal and construction labor trades and will spend time at the respective training centers learning from real-life apprenticeship training instructors. Entrepreneurship and Construction Management will also be taught in the course.
CTE: Engineering	Engineering I will explore the study and practice of engineering with an emphasis on civil engineering. The course will look at the history, types, duties, responsibilities, skills, knowledge, education, scope of work and opportunities in the field of engineering. Students will learn the relationship and role of engineers as they relate to the design and build environment.

SENIOR YEAR CREDITS

	Credits at ACE	Credits at Resident School	
		Regular	Advanced & AP
Science	.5 - Integrated Design and Construction Science II	-	-
Math	.5 - Technical Design & Construction Math II	-	1 - Pre Calc, Calc, Advanced or AP math
English	1 - Communication Skills II	-	1 - Honors or AP English language Arts
CTE	2 - Architecture II, Construction and Trades II, or Engineering II	-	
Social Studies	-	1 - Senior level offerings	1 - Sr. Offerings AP or Honors
Electives	-	<i>As Needed or desired</i>	-
Foreign Language	-	1 - Spanish (or other Foreign language)	1 - Honors Spanish (or other Foreign language)
Physical Ed.	-	-	-
Capstone	1	-	-
Totals	5 credits earned per year attending every other day	3 credits earned attending every other day, (4 cr. w/ elective)	4 credits earned attending every other day

SENIOR YEAR COURSE DESCRIPTIONS

	Course Descriptions
Science	Integrated Design and Construction Science II will continue to teach advanced applications of biology, chemistry, physics as well as environmental, life and earth sciences as they relate to students' individual areas of interest.
Math	Technical Design and Construction Math II teach advanced applications of algebra, geometry and trigonometry as they relate to students' specific areas of interest. Students in the Architecture and Engineering fields may pursue more abstract math while students in Construction and Trades will study math relevant to their chosen craft.
English	Communication Skills II will build upon the Junior course. Based on students' areas of interest and post-high school objectives, English instruction elements will be tailored to meet individual needs. Professional and career-related reading, writing and presentation skills will continue to be the focus of instruction and students will build portfolios that may include research projects, technical writing samples, speeches, Power Point presentations, resumes and letters.
CTE	While all students will continue to be involved in Architecture, Construction and Engineering, Senior students will choose an area in which to concentrate their studies. Advanced instruction will be offered in each of the major areas of study with academic and technical training tailored for each student. Senior students will participate in job shadowing and mentoring programs within their chosen area of study. Seniors will be expected to participate in at least one professional internship either during the summer prior to their Senior year or during their Senior year.
Capstone	The Capstone project will be an integrated part of students' experience and a critical part of their learning at ACE. The Capstone project will demonstrate students' thinking, academic knowledge, and industry skills by showcasing their best work. This hands-on project will include critical elements of the design and build professions and will include project portfolio presentations to a client or client equivalent panel. The Capstone project will meet the state graduation requirement for demonstrated "Extended Application" and home schools' requirement for a senior project.