

EBIA - Computer Science and Design Innovation Pathway - Program of Study

Industry Sector: Information and Communication Technologies

Pathway: Software and Systems Development

Pathway Mission	EBIA Upper School is a “Computer Science and Design Innovation” Linked Learning pathway which aims to prepare a diverse group of students, who reflect the Oakland community, to be successful in college and to be thoughtful, engaged citizens who are leaders and innovators in a 21st century global world.				
Pathway Vision	We strive to support students in using Information and Communication Technology (Computer Science) to design, innovate, and create change within our community. This focus allows us to integrate college-prep coursework with CTE (career technical education) and the social and emotional skills students need to be leaders and changemakers. Students learn to be problem solvers and strong advocates who utilize computer science, technology and the design process to create innovative solutions for the issues faced by their community. When students leave EBIA they are ready for college, a career in computer science, and to be leaders in whatever path they choose.				
Pathway COP Meeting Time:	9th Grade Program <ul style="list-style-type: none"> <i>Mondays 2:25-3:45 PLC meeting time</i> <i>Thursday 8-8:30 X-curricular grade level meetings</i> 	10th Grade Program <ul style="list-style-type: none"> <i>Mondays 2:25-3:45 PLC meeting time</i> <i>Thursday 8-8:30 X-curricular grade level meetings</i> 	11th Grade Program <ul style="list-style-type: none"> <i>Mondays 2:25-3:45 PLC meeting time</i> <i>Thursday 8-8:30 X-curricular grade level meetings</i> 	12th Grade Program <ul style="list-style-type: none"> <i>Mondays 2:25-3:45 PLC meeting time</i> <i>Thursday 8-8:30 X-curricular grade level meetings</i> 	Graduate Pathway Outcomes (Student Learning Outcomes)
Academic Core Student Cohort Integrity (Bold courses are cohorted)	English - <u>English 9</u> History - <u>World History</u> Science - <u>Biology</u> PE - <u>Fitness</u>	English - <u>English 10</u> Science - <u>AP CS Principles*</u> + <u>Physics</u> History - US Hist or AP US Hist	History - <u>Gov/Econ</u> Science - <u>Chemistry</u> English - English 11 or AP Language or AP Seminar	English - <u>English 12</u> Science - AP Env Sci or AP Physics 1	100% of EBIA students are in the Computer Science and Design Innovation Pathway. Graduates will achieve these outcomes: EBIA CSDI Pathway Student Outcomes
Math	Algebra I / Geo	Geo / Financial Alg / Pre-Calc	Financial Alg / Pre-Calc / AP Calc AB	Statistics / AP Calc AB	
Technical Core/Theme (CTE Sequence - all courses are cohorted)	<u>CSDI 1 - CS and Digital Design</u>	<u>CSDI 2 - AP CS Principles*</u> (also satisfies science requirement)	<u>CSDI 3 - CS and Design Innovation Capstone</u>	Senior Practicum <ul style="list-style-type: none"> Upper level CS or Design Course (<u>APCS A</u> or concurrent enrollment) <u>Internship</u> 	
Dual Enrollment	Merritt College: Coun 207A - Career Exploration	<i>Anticipate working with Merritt College to expand dual enrollment options in CS and Design</i>	<i>Anticipate working with Merritt College to expand dual enrollment options in CS and Design</i>	<i>Anticipate working with Merritt College to expand dual enrollment options in CS and Design</i>	

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<p>Integrated Projects/ Common Performance Assessments</p>	<p>Common Assessment: Common Rubrics used across all classes that align to our 5 grading outcomes:</p> <ul style="list-style-type: none"> • Knowledge and Thinking, • Oral Communication • Written Communication • Agency • Collaboration. <p>Integrated Project:</p> <p>9th: Bio Genetics Project (CSDI 1 + BIO)</p>	<p>Common Assessment: Common Rubrics used across all classes that align to our 5 grading outcomes:</p> <ul style="list-style-type: none"> • Knowledge and Thinking, • Oral Communication • Written Communication • Agency • Collaboration. <p>Integrated Project:</p> <p>10th: Internet Dilemmas Project (CSDI 2 + ENG 10)</p>	<p>Common Assessment: Common Rubrics used across all classes that align to our 5 grading outcomes:</p> <ul style="list-style-type: none"> • Knowledge and Thinking, • Oral Communication • Written Communication • Agency • Collaboration. <p>Integrated Project:</p> <p>Create Your Own Political Party (CSDI 3 + GOV-ECON)</p>	<p>Common Assessment: Common Rubrics used across all classes that align to our 5 grading outcomes:</p> <ul style="list-style-type: none"> • Knowledge and Thinking, • Oral Communication • Written Communication • Agency • Collaboration. <p>Integrated Project:</p> <p>Senior Symposium (Senior Practicum + ELA 12)</p>	
<p>Defenses or Capstones</p>	<p>End of Year Capstone Project</p> <p>PLP Conferences</p>	<p>End of Year Capstone Project - Innovation For Change - Students create a tech-driven innovation that addresses a need in the world (website, app, software, 2-d or 3-d CAD design) - Present solutions to panel of community/experts. (Includes English, Social Science, Science, Math, SEL, and CSDI / CTE)</p> <p>PLP Conferences</p>	<p>End of Year Capstone Project - Design for change - Utilize the Design Thinking Process to address a problem or challenge that includes industry/postsecondary /community Partnerships and Field Learning Experience. (Includes English, Social Science, Science, Math, SEL, and CSDI / CTE)</p> <p>PLP Conferences</p>	<p>Senior Symposium - All seniors present and defend the work done in their Senior Practicum</p> <p>End of Year Capstone Project Mentorship (seniors work with younger students on their capstone projects)</p> <p>PLP conferences</p>	
<p>Other Courses / Electives</p>	<p>Advisory ILT (Independent Learning Time) WBL (Work Based Learning)</p>	<p>Advisory 10 ILT (Independent Learning Time) WBL (Work Based Learning)</p>	<p>Advisory 11 ILT (Independent Learning Time) WBL (Work Based Learning)</p>	<p>Advisory 11 ILT (Independent Learning Time) WBL (Work Based Learning)</p>	

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	Spanish I, Heritage Spanish, or other LOTE	Spanish II (or other LOTE) Studio Band and Percussion (CTE elective)	Spanish III (or other LOTE) Journalism and Media Production (CTE elective)	AP Spanish AP Research	
Other Student Experiences	<p>Intersession (Fall, Winter, Spring)</p> <p>Intersession is a 1 week session with Work-Based-Learning and Computer Science and Design Innovation themed workshops</p> <p>9th grade Examples include: Engineering and Design, Kitchen Science, Career Awareness</p>	<p>Intersession (Fall, Winter, Spring)</p> <p>Intersession is a 1 week session with Work-Based-Learning and Computer Science and Design Innovation themed workshops</p> <p>10th grade Examples include: Coding Camp, Design Challenges, Digital Music Production, Entrepreneurship, Career Exploration, Internships</p>	<p>Intersession (Fall, Winter, Spring)</p> <p>Intersession is a 1 week session with Work-Based-Learning and Computer Science and Design Innovation themed workshops</p> <p>11th grade Examples include: Advanced Coding and Design Challenges, Internships, College Readiness, Career Preparation</p>	<p>Intersession (Fall, Winter, Spring)</p> <p>Intersession is a 1 week session with Work-Based-Learning and Computer Science and Design Innovation themed workshops</p> <p>12th grade Examples include: Advanced Coding and Design Challenges, Internships, College Application support including essay writing/feedback, College Tours, Independent Living Skills, Career Training</p>	
Work Based Learning	<p>WBL Plan Career Awareness</p> <p><i>Activities designed to promote awareness of careers, workplace norms and expectations, exposure to college and community options, and defining personal interests.</i></p> <ul style="list-style-type: none"> • Guest speakers • Career fair • Workplace tours • Career mentoring 	<p>Career Exploration</p> <p><i>Activities designed to promote the understanding of the connection between the classroom and “real life” learning, provide a deeper understanding of potential careers, and provide opportunities to dive into a particular industry, career, or occupation.</i></p>	<p>Career Preparation</p> <p><i>Activities designed to provide an in-depth finding of a particular career of interest, develop the skills and understanding of the education and/or training needed in a particular industry.</i></p> <ul style="list-style-type: none"> • Mock interviews • Internships • Student run business/enterprise 	<p>Career Training</p> <p><i>Activities designed to provide students with preparation for entry into specific careers, trade, or higher education.</i></p> <ul style="list-style-type: none"> • Mock Interviews • Internships • College level coursework • Senior Symposium • Portfolio Development 	<p>Certifications/Portfolio</p> <p>Because of the rapidly changing and creative nature of the CS and Design Innovation industry, we were advised by our Industry Advisory Board to focus students on building a portfolio of work, rather than any specific certifications. This portfolio will give students something to share during college and job interviews that shows the skills they have developed in the CSDI pathway. By graduation, students have had at least 8 opportunities to showcase their portfolios during PLP</p>

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	<ul style="list-style-type: none"> • Nepris Career Video Library • Naviance Career Exploration • Portfolio Development <p>WBL Integrated into coursework - Examples:</p> <p>Bio - partner with scientists that use computer modeling to model ecological systems and develop own models</p>	<ul style="list-style-type: none"> • Guest speakers • Industry-led projects • Informational interviews • Job shadowing • Career & College advising • Career fair • Career mentoring • Nepris Career Video Library • Portfolio Development <p>WBL Integrated into coursework - Examples:</p> <p>CSDI 2 (AP Comp Sci P) - Includes sections on the impact of computing on our world, which includes many work-based examples</p> <p>Geometry - Students design a roof for a local resident - including 3-D renderings and digital models. Students must present to an architect and contractor and get feedback before sharing the design with customers.</p>	<ul style="list-style-type: none"> • School industry projects • Service Learning Projects • Portfolio Development <p>WBL Integrated into coursework - Examples:</p> <p>CSDI 3 - Design and create a solution to a problem presented by an actual client. Solutions may include both digital and physical elements</p>	<p>WBL Integrated into coursework - Examples:</p> <p>Gov/Econ - class creates a website and digital campaign for a political campaign. County clerk and local politician reps visit and student study voting technology and how advances in technology have influenced politics</p> <p>AP Env. Sci - class partners with scientists who use computer modeling to predict climate change</p>	<p>meetings as well as participating in the Senior Symposium where they present and defend their work to teachers, advisors, and parents.</p>
<p>Student Leadership</p>	<p>Student Led Clubs</p>	<p>Course: Leadership in the community</p> <p>Student Pathway Ambassadors</p> <p>Student Led Clubs</p>	<p>Course: Leadership in the community</p> <p>Student Pathway Ambassadors</p> <p>Peer Mentorship Team</p>	<p>Course: Advanced Leadership in the community</p> <p>Student Pathway Ambassadors</p> <p>Capstone Project Mentors</p>	

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			Peer Tutor Team Student Led Clubs	Peer Mentorship Team Peer Tutor Team Teacher Assistants Student Led Clubs
Summer Learning & Extended Learning (before & after School, inter-session)	Intersession - 1 week, 3x/year Summer Bridge “Phoenix Academy” Teacher Office Hours before and after school 2x/week	Intersession - 1 week, 3x/year Summer Bridge - credit recovery and skill development Teacher Office Hours before and after school 2x/week	Intersession - 1 week, 3x/year Summer Bridge - credit recovery and skill development Teacher Office Hours before and after school 2x/week	Intersession - 1 week, 3x/year Summer Bridge - credit recovery and skill development Teacher Office Hours before and after school 2x/week
College Exposure	Dual Enrollment - Coun 207 Career Exploration, includes connections to the college requirements needed. PLP - Advisory time used for PLP (Personalized Learning Plan) which includes planning for college and career. This is updated and presented to family and advisory twice per year.	College awareness lessons in Advisory curriculum College Rep Visits to EBIA Beginning College Search List PLP continues	College planning lessons in Advisory curriculum College rep visits to EBIA Virtual College Campus Visits College search list and counseling sessions Workshops for scholarship and college applications including essay writing PLP continues	College Application Lessons in Advisory Curriculum College rep visits to EBIA All students apply to multiple colleges, managed by advisor and counselor 2 college visits Direct support for college applications, financial aid applications, and scholarship essays PLP continues
Study Tour Destinations	Virtual - student choice of tour locations through Nepris platform	Virtual - student choice of tour locations through Nepris platform	In Person/Virtual workplace visits with Industry Partners. Past examples include: 44 Energy Technologies , Shotspotter , Jacobs Institute for	In Person/Virtual workplace visits with Industry Partners. Past examples include: 44 Energy Technologies , Shotspotter , Jacobs Institute for

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			Design Innovation (UC Berkeley). Virtual - student choice of tour locations through Nepris platform	Design Innovation (UC Berkeley). Virtual - student choice of tour locations through Nepris platform	
Advisory Structure	Meets Daily Focus: SEL and college/career exploration Run by looped advisor	Meets Daily Focus: SEL and college/career awareness Run by looped advisor	Meets Daily Focus: College/career planning Run by looped advisor	Meets Daily Focus: College/Career readiness and School Leadership Run by looped advisor	
Personalized Supports	<p>Academic Supports: Classes which support:</p> <ul style="list-style-type: none"> • ELD • Literacy (SPED and ELA) • Math (SPED and Math Problem Solving) • Academic Success (SPED exec. functioning) <p>SPED Push-in support in all core classes</p> <p>ILT (independent learning time) with teacher and advisor support</p> <p>Peer Tutoring program</p> <p>School-wide streamlined credit-recovery program</p> <p>Mental Health Supports: Counselor and Therapist - scheduled and as-needed visits</p> <p>Peer mentorship program</p> <p>Student-Led clubs and activities</p>	Same as 9th graders	All those supports in 9th grade plus personalized college/career counseling	All those supports in 11th grade plus personalized college application support	