Building IT Pathways Across the Spectrum

High School District 214

Dan Weidner

Director of Academic Programs and Pathways

Krista Paul

Assistant Director of Career and Technical Education

Career Pathways Theory of Action

High School District 214

Making High School Relevant

High School District 214

Career Pathways and Community Partnerships

" The restructuring of academic programs along career pathways elevates the rigor and relevance of elective coursework to more closely align the goals of a core curriculum with the demands of a continually evolving technology driven economy.
For our nation's high schools to be relevant in this new economy, they must serve as an integral part in a students progression toward a career pathway informed by workplace learning experiences."

Partnerships with Promise
Business Horizon Quarterly, October 2014
US Chamber of Commerce Education Foundation
Dr. Lazaro Lopez, Associate Superintendent

http://bit.ly/D214Pathways

Academic Readiness for College and Career

Not only do students in early college credit meet qualifying student criteria, they experience college level work in their field of interest

Power of 15: Students who earn 15 credits are twice as likely to complete

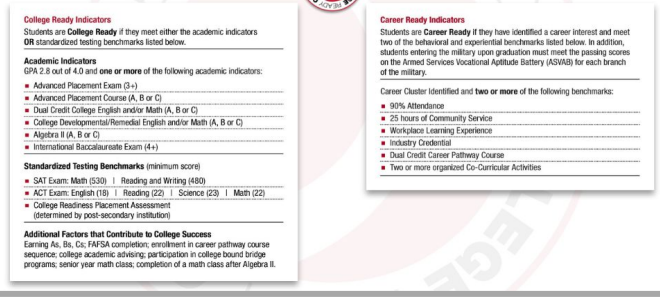
Align Career Pathways with a goal of ensuring all students are college ready in English and Math

Eastern Illinois University · Moraine Valley Community College · Arizona State University · AP · Triton College · Lewis University · National Louis University · Northeastern · Northern Illinois University · Harper College

the Power of 15 — Discover your future.

Class of 2016
34,565 credits of potential early college credit earned

Redefining Ready!



College Ready Indicators
Students are **College Ready** if they meet either the academic indicators **OR** standardized testing benchmarks listed below.

Academic Indicators
GPA 2.8 out of 4.0 and **one or more** of the following academic indicators:

- Advanced Placement Exam (3+)
- Advanced Placement Course (A, B or C)
- Dual Credit College English and/or Math (A, B or C)
- College Developmental/Remedial English and/or Math (A, B or C)
- Algebra II (A, B or C)
- International Baccalaureate Exam (4+)

Standardized Testing Benchmarks (minimum score)

- SAT Exam: Math (530) | Reading and Writing (480)
- ACT Exam: English (18) | Reading (22) | Science (23) | Math (22)
- College Readiness Placement Assessment (determined by post-secondary institution)

Additional Factors that Contribute to College Success
Earning As, Bs, Cs; FAFSA completion; enrollment in career pathway course sequence; college academic advising; participation in college bound bridge programs; senior year math class; completion of a math class after Algebra II.

Career Ready Indicators
Students are **Career Ready** if they have identified a career interest and meet two of the behavioral and experiential benchmarks listed below. In addition, students entering the military upon graduation must meet the passing scores on the Armed Services Vocational Aptitude Battery (ASVAB) for each branch of the military.

Career Cluster Identified and **two or more** of the following benchmarks:

- 90% Attendance
- 25 hours of Community Service
- Workplace Learning Experience
- Industry Credential
- Dual Credit Career Pathway Course
- Two or more organized Co-Curricular Activities

Career Pathways

High School Re-envisioned - Career Programs of Study

Engagement through Relevance: Guiding Principles

1. Sequence of courses that lead beyond high school
2. Workplace learning experience that provides students with real-world understanding of career areas through internships or problem-based learning experience
3. Opportunity to earn career certification/college credit

Pathway Development Process

High School District 214

A systematic approach of engagements, development, and deployment efforts allows for replicable and scalable career pathway efforts.

1. Advisory Team
2. Research & Evaluation
3. Pathway Development
4. Implementation & Funding
5. Redefine High School Workplace Learning

Pathway Development Process

Advisory Team

- **Bring together representative team of district, building, post-secondary education, and industry/community leaders**
- Gauge interest and support
- Develop broad buy-in
- **Discuss scalability**

IT Pathway Efforts

Critical issues seeking feedback

- How do we best develop relevance and engagement?
- What does the IT career pathway look like for the next generation of careers?
- What are key sectors?

Limited initial capacity of support

- Tapped into state-wide discussions
- Alumni and personal connections
- Utilized in house professionals

Pathway Development Process

Research and Evaluation

- **Review job outlook**
- ID existing program models
- ID college course/degree offerings and required teacher credentialing
- Identify potential certifications
- Research external experiences and workplace learning opportunities
- Identify resources needed, budgets, external funding sources
- **Identify teacher capacity and professional development needs**
- Identify success metrics

IT Pathway Efforts

Job Outlook - High Wage/High Need

- Bureau of Labor Statistics
- H-1B Visas (DOL Youth CareerConnect grant)
- STEM Learning Exchanges

Teacher Capacity/PD needs (2013-14)

- 6 business education instructors with computer science teaching experience district-wide
- 2 computer science courses, 2 networking courses

Pathway Development Process

Pathway Development

- ➔ Identify potential courses
- ➔ Develop new course proposals
- ➔ Share DRAFT course sequence with stakeholders
- ➔ Identify extensions to the classroom (summer, co-curricular, field trips)
- ➔ Develop bridges between secondary and post-secondary opportunities
- ➔ **Engage in curriculum development**
- ➔ **Teacher professional development**
- ➔ **Partner with industry for potential workplace learning opportunities**

IT Pathway Efforts

- Created a 4-year IT career pathway plan with development, pilot, and deployment time periods identified
- In- and out-of-district professional development opportunities for existing and new IT instructors
  - Mobile Makers
  - AP workshops
  - Graduate coursework
  - In-district curriculum and planning
- Industry connections and workplace learning development

Pathway Development Process

Implementation & Funding

- **Develop teacher led advisory team**
- External partner engagement
- Determine sustainability of district support
- Pursue supplemental funding sources
- Development and support of external experiences and workplace learning opportunities
- **Develop internal and external marketing materials**
- Collect data according to pathway metrics
- Identify opportunities to scale
- Review and modify as needed

IT Pathway Efforts

- Career Pathway Teacher Lead Model and Advisories
- Cybersecurity Working Group

- Counselor and Teacher Career Pathways Internal University
- Career Pathway Marketing Materials
- Targeted messaging based upon career cluster identification

Pathway Development Process

Refine High School Workplace Learning

- Student internship and workplace learning experiences primarily provided after junior through senior year
- Students with transition services may extend this timeline through age 22
- Students are individually placed with employers based on interest and preparation in program of study
- Students with disabilities begin simulated workplace experiences at school site and progress through tiered levels of modified support depending on need
- Employer partners with a Career Discovery Advisor assigned to his/her cluster
- Employer provides an internship experience in one of two ways:
  - Micro-internship: Project-based 1–3 weeks in duration
  - Traditional: Semester long experience 6–16 weeks in duration
- Internally develop and expand opportunities through on site micro businesses

Pathway Development Process

Refine High School Workplace Learning

A shift to ONE common vision

→ **Old Model - 2 Departments/2 Associate Superintendents**
- Teaching and Learning
  - CTE, Elective Academics, Traditional Internships
- Student Services
  - Counseling, SpEd, Vocational Placements, Transition Plans

→ **New Model - 1 Department/1 Associate Superintendent**
- Coordinates entire student academic experience
- Center for Career Discovery created from SPED and Gen Ed resources

Career readiness services, programs and events designed to support students' career development.

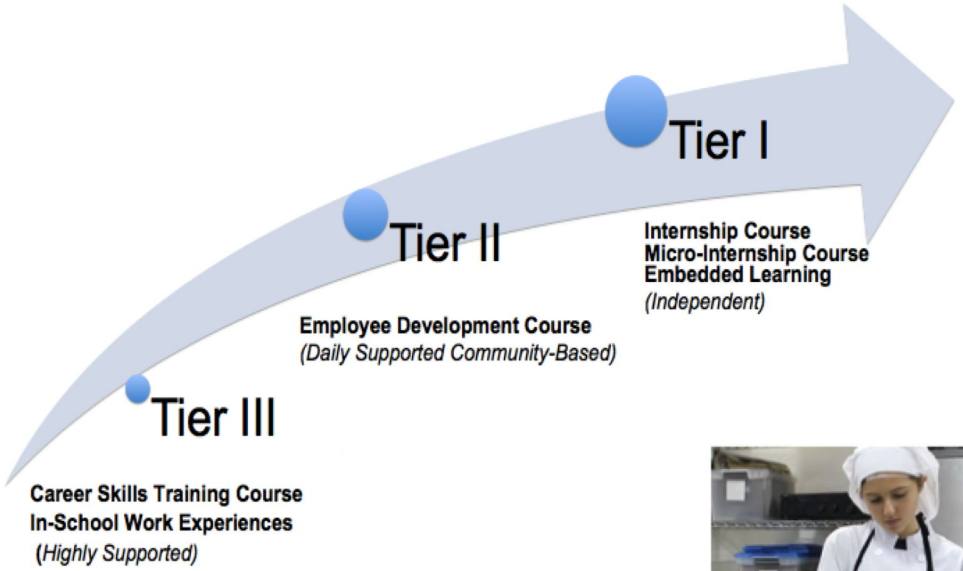
Assistant Director of CTE

CTE Programs Supervisor
- Building/School Based Career Advisors (6)
- Community Based Career Advisors (2)

Vocational Programs Supervisor
- Vocational Evaluation Coordinator (1)
- Job Placement Specialists (5)
- On-site Job Coaches (11)
- Discover IT Advisors (4 - Federal DEI IT Grant)

Center for Career Discovery

Refine High School Workplace Learning



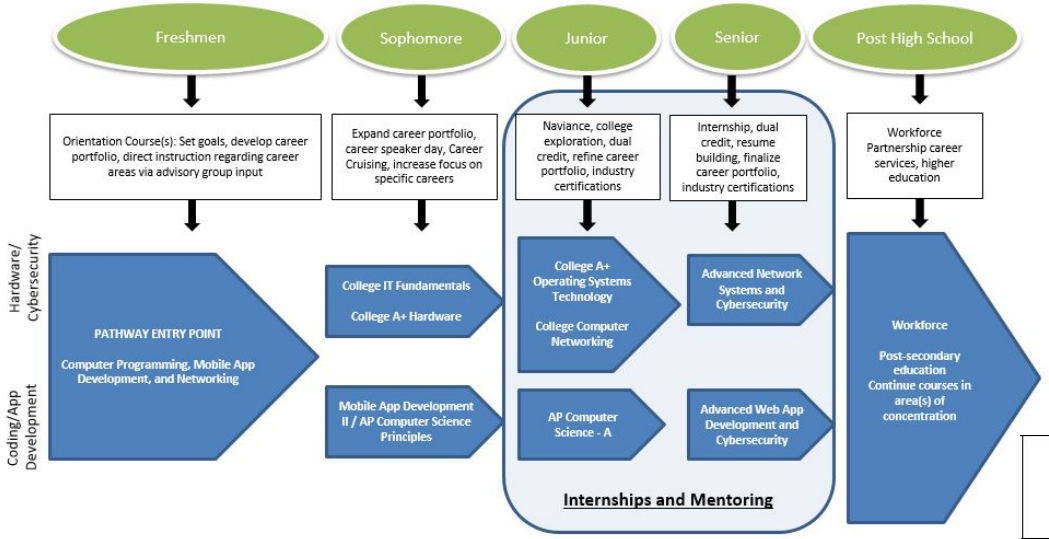
Program Highlights

- 950+ Industry Partners
- 2,750 workplace learning experiences (2016-17)
- Combination of embedded and external learning experiences

Flash Talk on Center for Career Discovery - Wednesday @ 10:30am

D214 IT Career Pathways

Programs of Study and Enrollment Trends



- **20+ College Credit Hours**
- **4 Industry Credentials**
- **Internship Experience**

Early College Opportunities
College IT Fundamentals (3 hours), College A+ Hardware (3 Hours), College A+ Operating Systems Technologies (3 hours), College Computer Networking (3 hours), AP Computer Science Principles (3),AP Computer Science – A (4 hours), Advanced Network Systems and Cybersecurity (tbd), Advanced Web App Development and Cybersecurity (tbd)

Certifications
CompTIA IT Fundamentals, CompTIA A+, CompTIA Network+, CompTIA Security+

External Experiences
District Internship Program, Micro-internships

Coding Across the Mathematics Curriculum			
Algebra	Geometry	Advanced Algebra/Pre-Calculus	Calculus

	2013-14 (Prior to pathway Redesign)	2017-18 Enrollment	2018-19 Requests
Computer Programming	91	--	--
iOS Mobile App Development and Networking	--	343	388
AP Computer Science - P/Mobile App Development 2	--	111	139
AP Computer Science - A	69	105	101
Advanced Web App Deveopment and Cybersecurity	--	6	5
Computer Repair A+ Certification	113	105	107
Cisco Networking Basics	16	36	34
Advanced Network Concepts/Cybersecurity	--	11	25
TOTAL	**198**	**717**	**799**