

Embedding AI Skills Into Work-Based Learning

An Employer-Informed AI Workforce Model for Career Services

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Why Now: AI Disruption

39%

Growth in AI-related job roles in NYC
Jan 2023 – Jan 2024

KEY SIGNALS

Surpassed San Francisco's 25% growth the fastest AI job growth of any major US city

Early-career talent expected to supervise, interpret, and responsibly use AI outputs

VC and startup ecosystem actively expanding technical and strategic workforce in NYC

Entry-level roles in traditional sectors are shrinking while AI-focused roles grow

Why Now: The Confidence & Ethics Gap

KEY INSIGHT

Teaching students how to use AI was not enough. To truly support student outcomes, we needed to address when, why, and how AI can be used responsibly, transparently, and in alignment with professional expectations, while maintaining accuracy.

STUDENT EXAMPLE

A student refused to use AI, believing it would be seen as cheating and would invalidate their work, highlighting the urgent need for clear, transparent ethical frameworks in AI education.



Tech Talent Pipeline Residency

1181 Participants

100 Employer Partners

Tripled **(3X)** Job Placement Rates

The 12-week paid summer internship program is designed to deliver qualified CUNY tech talent to local businesses at no cost to the employer, while providing short-term professional experience to competitive NYC undergraduates

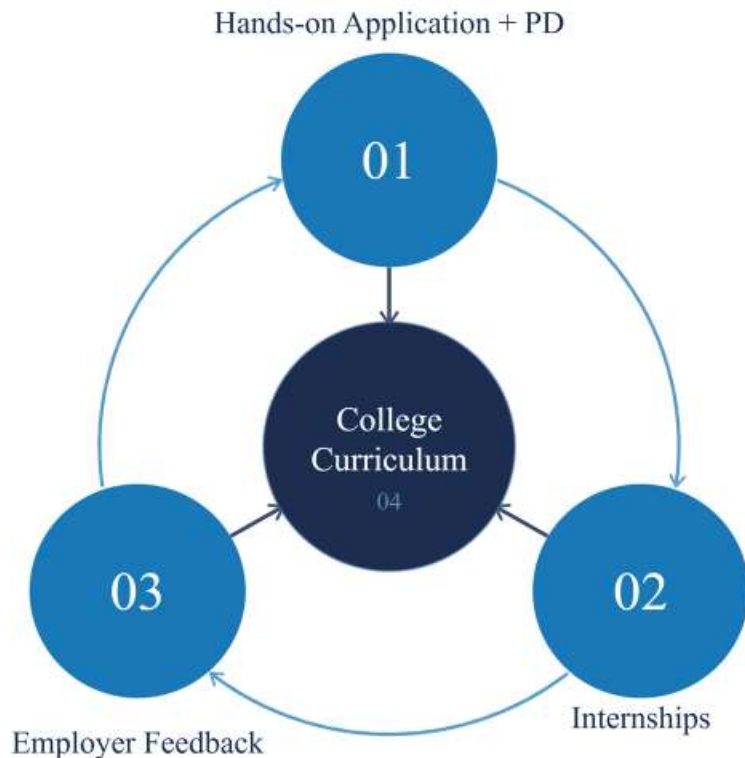
Baruch, Hunter College, Lehman College, City College, John Jay College, Brooklyn College, College of Staten Island, and Medgar Evers College, City Tech, LaGuardia, and Borough of Manhattan Community College

Bridging the gap between academic preparation and employer expectations in NYC's tech sector.

Preparing Students for Tech Careers

A 1-Year Employer Feedback Loop

Supports integration of work-based learning into curriculum by partnering with employers through internships, capturing real-time feedback on in-demand skills, and making both technical and soft skills explicit through capstone projects, certifications, and presentations.



Addressing the Skills Gap Swiftly & Rigorously

Key Challenges

01

Curriculum Cycles Too Slow

Traditional update processes lack the speed needed to respond to rapidly shifting labor market demands.

02

Direct Industry Input & Validation

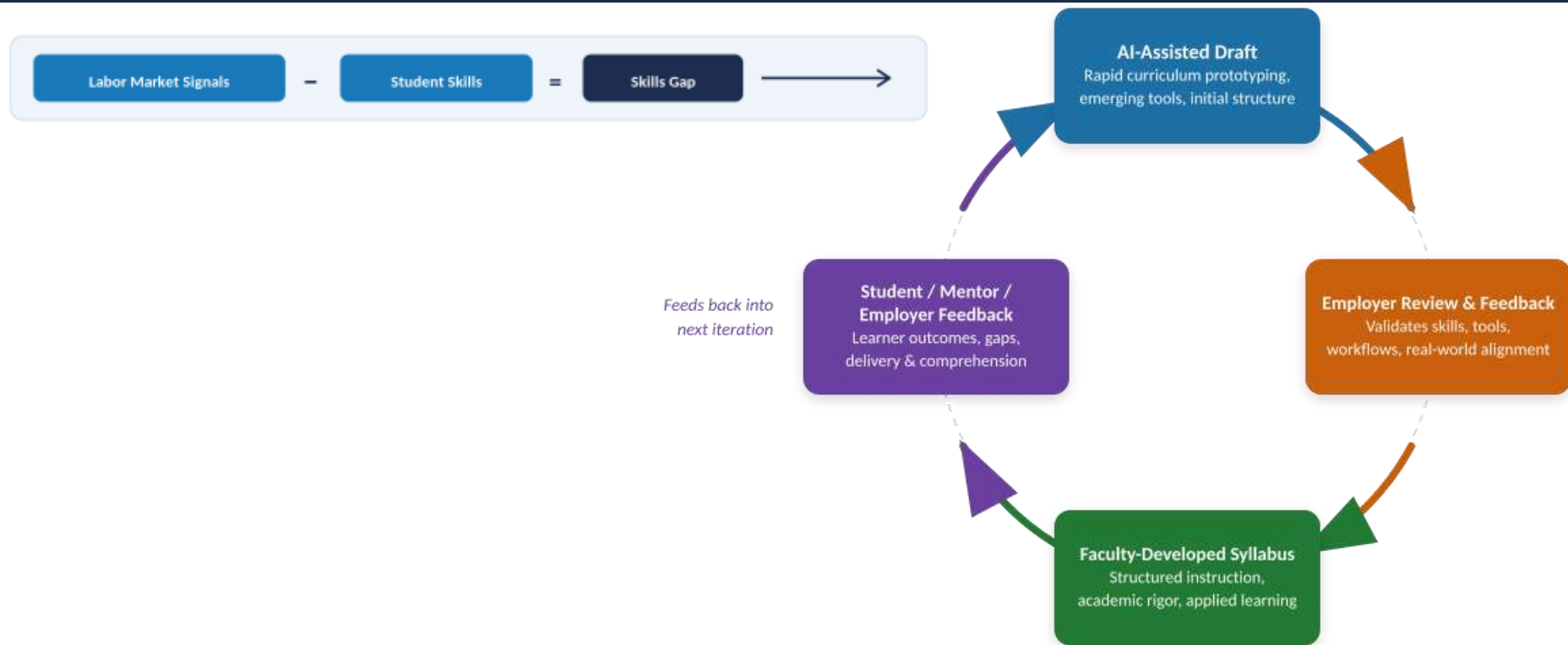
Syllabi built without direct employer input lead to misalignment between what students learn and what employers need.

03

Limited Resources

Staff capacity constraints make it difficult to overhaul existing programs or develop new ones at scale.

Systems Design for Piloted Workforce Model



Employer Proxy: Industry Insight

EMPLOYER PROXY

*AI & Cybersecurity Consultant
engaged as employer proxy*

ROLE & CONTRIBUTIONS

- Reviewed and annotated the full curriculum draft
- Validated transferable skills and scope appropriate for early-career talent
- Confirmed authenticity of AI use cases across all projects
- Provided real-world employer perspective on expectations and deliverables

Piloted Workforce Model

Goal: Build applied, responsible AI literacy in cybersecurity, and data analytics that signals early-career readiness.

Learning Objectives:

- Apply AI tools to cybersecurity and data analytics problems
- Critically evaluate AI outputs
- Identify ethical and professional considerations
- Connect AI use to real-world employer expectations

STRUCTURE

- 5-day workshop 2–3 hours/day commitment - Make it easy for students to complete
- **Asynchronous**- cost-efficient, flexible delivery, and scalable
- Activity-based- **applied learning model**
- **Career-ready** products: final project and resume/ interview guide

Career Readiness

Unique Applied Project

Apply AI tools to realistic workplace scenarios.

Resume Guides

Highlight transferable and technical AI use

Interview Prep

Presented final projects and reflection

Career Readiness: Unique Applied Project



The background of the slide features a dark blue isometric illustration. It depicts a person sitting at a desk with a laptop, surrounded by various digital elements: a server tower labeled 'AI' with a plus sign, several tablets or screens displaying charts and graphs, and a speech bubble with a checkmark. The overall theme is technology and healthcare.

AI USE AT NORTHBRIDGE SEPCIALTY CARE

By: Yimara McMitchell, Hayley Penafiel, Richard Lee

Career Readiness: RESUME

Observable signals that prove a student can *supervise, interpret, and responsibly use AI*.

NSC AI Custom GPT Project

January 2026

- Developed and codified a formal AI Use Policy for a mock healthcare organization (NorthBridge Specialty Care), defining safeguards for PHI/PII handling, human review requirements, and AI system controls
- Engineered policy requirements into 50+ enforceable system constraints within a Custom GPT built for a simulated clinical environment
- Tested and verified safeguard effectiveness by simulating policy-violation prompts, achieving 100% policy-aligned refusal responses during structured testing

Supervise: Sets constraints, Designs guardrails, Anticipates failure

Interpret: Evaluates outputs, Identifies limitations, Applies context

Use Responsibly: Applies policy, Protects data, Considers impact

Re-iteration : Improving the Model

Student Feedback

Improve collaboration in an online environment, clarity around expectations for the final project, time for more than one AI project

Mentor Feedback

Deeper dive, more analytical approach, increased guidance

Employer Feedback

Some students needed additional clarification on scope, expectations, and evaluation criteria

A Systems Lever: Integrating Emerging Tech into Career Readiness

Student Confidence

Builds student confidence in ethical and responsible AI use before they enter the workplace.

Employer Co-ownership

Employers co-own the design and validation of AI-use expectations, reducing risk and strengthening trust in candidate readiness.

Replicable Framework

Using existing structures makes the model scalable across programs, campuses, and work-based learning contexts.

AI Career Readiness Design Lab

A small group exercise to translate employer expectation into a practical, next semester pilot.

AI Career Readiness Design Lab

In your group, identify **one AI-related skill, behavior, or competency** that employers now expect, but students on your campus are not yet being taught to **demonstrate clearly**.

Labor Market Signal:

- What specific signal tells you this expectation exists?
- Use a job posting, employer quote, internship feedback, or hiring trend.

Student Gap

- What can students currently not show, explain, or do clearly?
- Where is the disconnect between classroom exposure and workplace demonstration?

Employer or Campus Partner

- Who would help make this real and relevant?
- Think: employer, alumni, faculty member, internship coordinator, advisory board member.

AI Career Readiness Design Lab

Low-Lift Pilot for Next Semester

Design one small, time-bound experiment that uses:

- 1 existing course, workshop, or program touchpoint
- 1 employer or campus partner
- 1 AI-related task or reflection
- 1 observable artifact or data point

Possible artifacts: short memo, resume bullet, mini-presentation, employer feedback form, reflection, project rubric, or interview response.

AI Career Readiness Design Lab

Step 1 – Employer expectation (Cyber, career-services level)

In early-career cybersecurity roles, employers expect analysts to work with AI-assisted threat detection tools and to be able to explain, in plain language, what they trusted and what they double-checked.

Step 2 – Labor market signal (Cyber, what *you* would actually see)

Job postings for junior cyber / SOC analyst roles mention “AI-assisted tools” or “anomaly detection” as part of the job.

In employer conversations, you hear some version of: “It’s fine if students use AI, but they need to be able to explain how they used it and what they watched out for.”

Step 3 – Student gap (Cyber, from your vantage point)

Students say “I used AI for threat detection” but cannot describe what they checked or where the tool might be wrong.

In mock interviews or advising, they struggle to give a concrete example of using AI in a cyber context and what judgment they applied.

Step 4 – Employer / campus partner (Cyber, planning level)

External partner: one employer contact who hires cyber interns or analysts (e.g., SOC manager, cyber alum, advisory board member).

Internal partner: one faculty member who teaches a cybersecurity course where AI is already mentioned or could be added.

Step 5 – Low-lift pilot (planning sketch, not a lab spec)

In partnership with that faculty member and employer, co-design **one class session or workshop** next term where students:

- see an example of AI-assisted threat detection,
- practice explaining how they would work with that tool (what they would trust, what they would question), and
- produce a short written or spoken explanation that the employer can react to.”

AI Career Readiness Design Lab

Debrief

Be ready to share out on three things:

- The employer expectation you chose
- The student gap you identified
- The pilot you could realistically launch next semester

Thank You

Interested in enacting this model yourself?

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