CS Starter Academy 2024

Empowering Futures with the CS Starter Academy

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DISCOVERY PARTNERS INSTITUTE

PART OF THE UNIVERSITY OF ILLINOIS SYSTEM

Stephanie DeCicco, EdD

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Discovery Partners Institute, U of I Systems

- 34 years in the Illinois Higher Education System
- Worked as an administrator in Community Colleges and Universities (advisor, director, dean, VP)
- Attended undergrad and grad here in Illinois!

Today's One BIG Goal

To identify at least one take-away idea, suggestion, program, process, etc. that can help community college students overcome the barriers in transferring to a four-year college.

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Who is the Discovery Partners Institute?

DPI is an institute within the University of Illinois System, and its overarching goal is to propel Chicago and Illinois into a pre-eminent and inclusive tech economy over the next decade.

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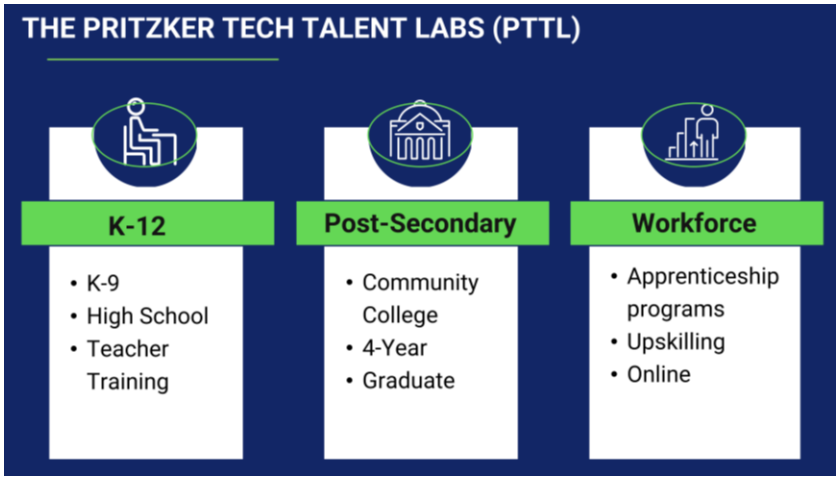
Within DPI, the Pritzker Tech Talent Labs (PTTL) Unit offers programming for middle, high school, community college, 4-year and graduate students, K-12 teachers, and the workforce to develop diverse tech talent.



The CS Starter Academy is part of the Post-Secondary sub-unit, and is a program specifically for community college students to help develop diversify CS talent by promoting CS and clarifying the transfer process from community college to 4-year

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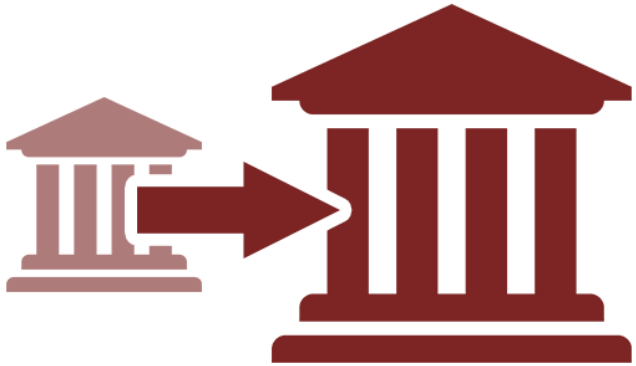
Although 80% of CC students say they intend to transfer to a 4-year college or university, only 31% actually do within 6 years because of institutional barriers.

Of the 31% that do transfer, less than half complete a bachelor's degree due to non-academic reasons.



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By the numbers….

EX: 1000 community college students

- 80% say they want to transfer
  800 students
- But only 31% actually transfer
  310 students
- Less than half of that 310 actually graduate
  <155 students

Just under 16% of the original 1000!

What contributes to such a low transfer rate?

- Credit loss during transfer
- Financial constraints
- Complexity of transfer
- Lack of confidence in studying Computer Science or Tech
- Inadequate transfer support (500:1 ratios, lack of training, etc.)
- Students of color are disproportionately directed towards non-transferable courses

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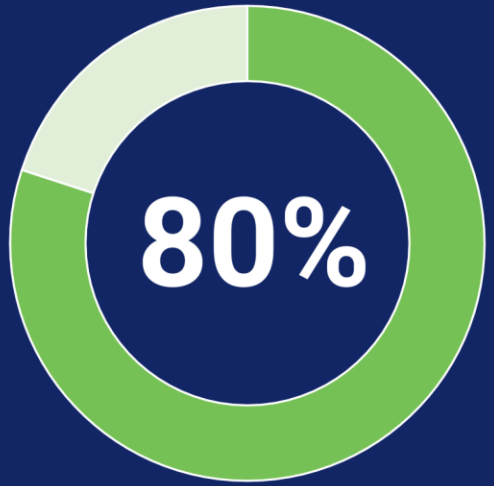
Why focus on just Computer Science?

What percentage of jobs in the U.S. today require computing knowledge?



Only **8%** of graduates in CS, computer engineering, and information sciences across the University of Illinois System were Black or Latinx in 2022. **These populations remain significantly underrepresented in the Chicago tech community** (currently **12-14%** of tech workforce)

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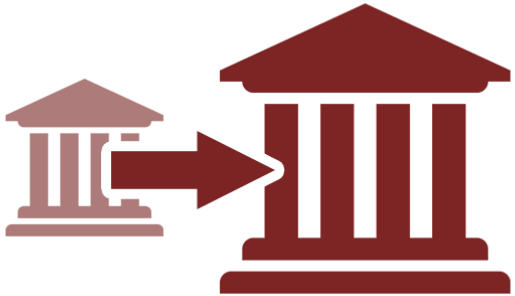
This is why programs like CSSA are necessary!

CSSA tackles the crucial problem of **TRANSFER OBSTACLES and INSTITUTIONAL BARRIERS** that disproportionately hinder minority students, which in turn affects diversity within Computer Science.

Helping Students Transfer and Succeed



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What is the CS Starter Academy?

- The CS Starter Academy (CSSA) is two-semester cohort program designed to help community college students navigate the Computer Science transfer pathway and their career journey.
- The program is funded by Google and is offered by DPI in partnership with City Colleges of Chicago.
- CSSA is a non-credit, no cost, supportive educational initiative that requires continuous, committed participation up to 3-5 hours per week during the Fall and Spring semesters.

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Google

DPI

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CITY COLLEGES OF CHICAGO

DPI

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What are the goals of the CS Starter Academy?

- Introduce the variety of sectors of CS to inform job choice, course selection and networking strategies
- Introduce the university setting to enhance students' sense of belonging and interest in transfer
- Boost students' self-efficacy in envisioning themselves in CS careers
- Clarify and promote the CS pathway from CC to 4-year
- De-mystify the complex transfer process
- Enrollment and support in the Google Data Analytics Cert or Google Cybersecurity Certificate

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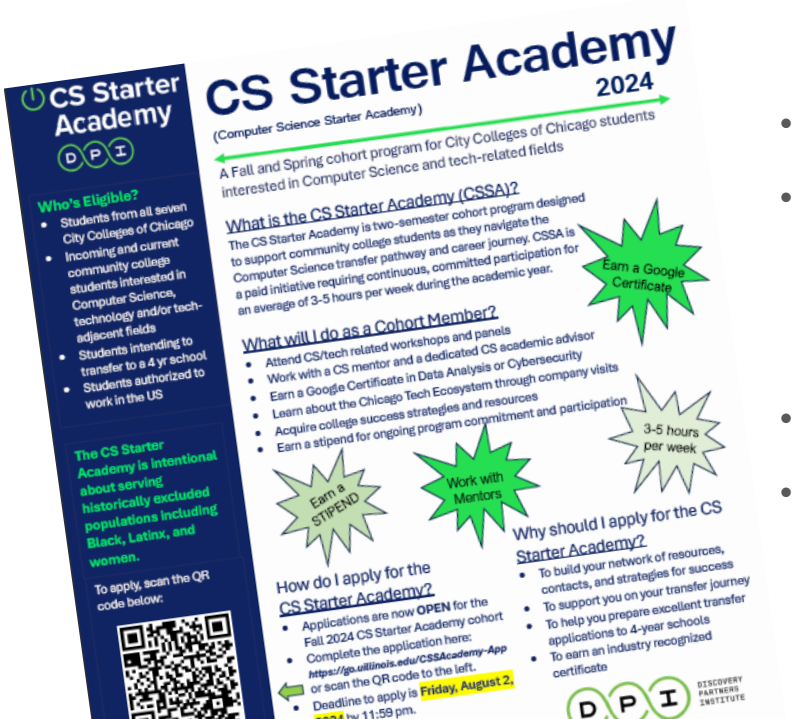
How do students find us/apply for the program?



- We start advertising in May – August
- Shared out to LinkedIN, Twitter/X, email to CCC advisors/faculty/ college administration, referrals
- All applicants are interviewed
- Program begins the week before the start of CCC Fall 2024 semester

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What is the criteria for acceptance into the cohort?

- Currently enrolled City Colleges of Chicago credit student (pt or ft) during BOTH Fall 2024 and Spring 2025 semesters
- Studying Computer Science, Engineering, tech or tech-adjacent field
- Intending to transfer to a 4-year school (on an AA/AS/AES pathway)
- Authorized to work in the US

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What can students expect as a CSSA 2024 Cohort Member?

- Close-knit cohort experience
- CS/tech related workshops and panels
- Engagement with a CS mentor and a dedicated CS academic advisor
- Enrollment in a Google Certificate in Data Analysis or Cybersecurity
- Learn about the Chicago Tech Ecosystem through company visits
- Acquire college success strategies and resources
- Earn a stipend for ongoing program commitment and participation

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Are there activities students must attend?

Yes! Cohort members must attend the following activities to earn the stipend:

- Orientation (Friday, August 16th, 12:00 pm – 3:30 pm)
- Monthly CSSA cohort meetings
- Identified monthly events (2 to 3/month) EX: workshops, company visits, career events, transfer sessions, etc.) held on Thursday afternoons during Fall and Spring semesters
- Monthly CS Academic Advising and CS Mentor meetings (via Zoom)
- Enrollment in a Google Certificate (Cybersecurity or Data Analytics)

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Fall 2024	August	Sept	Oct	Nov	Dec
Workshops		LinkedIn - Jane Hirt @ DPI*	Melissa Harris – Exec Comm @ DPI*	Guaranteed Pathways Workshop @ DPI	Financial Literacy Workshop @ DPI
Panels/ Speaker		CSSA Completer Panel*	Career Panel Transfer Admissions Workshop @ DPI	UIUC/UIC Transfer Panels @ DPI	
Events	CSSA Orientation*	Company Visit*	An Hour of Code		High Tech Chi (12/7)
Academic	Start Google Certificate*				
Spring 2025	**Jan**	**Feb**	**March**	**April**	**May**
Workshops	Building Social Capital*	Technical Interview Workshop*	Career Workshop (Google curriculum) *	Hackathon Participation	
Panels/ Speaker	Artificial Intelligence Panel	Guest Speaker			
Events		4-year Career Fairs (IIT, DePaul, UIC)	Student Success Transfer Panels	Company Visit*	
Academic	CCC Transfer Leadership Class	CCC Transfer Leadership Class	CCC Transfer Leadership Class	Complete Google Certificate*	

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- 85 Total Events offered
- Advising/Faculty Professional Dev
- Company Visits
- Hackathons
- Networking events
- Summits
- Workshops
- Webinars
- Career Fairs
- Much more…

Events/Activities Offered or Available	Fall 2023	Spring 2024	Summer 2024
Career Fairs		7	
CCC Events		6	
Cyber Security Classes		13	1
Monthly Cohort Meetings	3	6	2
Company Visits	1	1	
Digital Bridge Sessions (Summer '24)			5
CCC Faculty/Advisor Prof Dev Event		1	
Guest Speakers and Workshops	4	3	
Hackathons		4	2
Networking Events	4	3	
Curriculum Facilitator Office Hours		5	
University Open House		1	
Orientation	1		
Panel		2	
Summits	1	4	
UIC Summer Program		1	
Webinars		5	
SUB TOTAL	14	62	9
		TOTAL EVENTS/ACTIVITIES	85

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Who partners with DPI to make CSSA happen?

- City Colleges of Chicago – students from all CCC can participate
- Google – our funder!
- The Chicago Tech Ecosystem
- The Learning Partnership

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Quick Results To Date

- Retained 83% of the cohort
- 37% of have completed the Certificate
- 70% have completed 5 of 8 courses in the cert
- We were just funded for Year 2!

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Google Cybersecurity Certificate	CSSA Cohort	CPS Teacher PLC*
Currently Active	33	58
Completed Certificate (8 Courses)	12 (37%)	14 (24%)
Completed 5-7 Courses	11 (33%)	2 (4%)
Completed 1-4 Courses	10 (30%)	35 (61%)
Completed 0 courses	–	6 (11%)
Initially Registered	41	103
Withdrew or Withdrawn	8 (20%)	45 (44%)

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Demographics

CSSA 2023 Application Process	
Applied	108
Accepted	40

Gender	
Female	30%
Male	70%

Home City College	
Harold Washington College	53%
Olive-Harvey College	20%
Wright College	20%
Kennedy-King College	5%
Daley College	2%

Ethnicity	
Black or African American	42%
Hispanic or LatinX	28%
Other	17%
White	10%
Multi-Racial	3%

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Touchpoints Type in AY 23-24	Frequency
CS Academic Advising Appointments	62
Mentor Conversations	464

Advising Theme	Fall 2023	Spring 2024
Q's About Applying for Transfer	24	15
Courses	10	9
Q's About Internships	8	8
Google Certificate	2	7
Mentor Program/Being a Mentor	2	5
Accepted to 4-year	0	4
Issues/Concerns with Grades	4	4
Cybersecurity	9	4
Graduating This Year	1	3
Associate's Degree Requirements	2	1

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Evaluation Component

We evaluate CSSA by applying the PTTL Outcomes Framework, in addition to using our own evaluation framework.

ULTIMATE IMPACT Retain diverse talent in computing and computing-related fields in Illinois.			
GOAL Empower participants to formulate plans and/or take action to pursue computing or computing-related fields			
Knowledge	**Skills & Confidence**	**Connections**	**Career**
OUTCOMES			
Increase knowledge of education and career path options	Improve skills and/or confidence in technical field/area/practices	Build connection to like-minded peers	Increase career readiness
Improve technical knowledge in field/area/practice	Improve skills in adaptive thinking, planning, and pivoting	Building connections to universities	Increase access to credentials
Improve knowledge of the Chicago tech community	Build confidence that there is a role/place for them in the computer science field	Build connections with Chicago tech community	Increase access to tech job/career opportunities

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What we learned in Year 1:

- Engagement that falls outside of students' credit coursework must be purposeful, succinct, accessible, and well-timed
- To successfully engage students, we need to know what students find meaningful and helpful to them on their journey
- Compensate students for employment lost due to participation in a program that levels the playing field for underrepresented students
- Offer multiple options and modes for participation
- Offer a variety of career-based certificates
- Refine our operations – be more efficient on the inside

What we learned in Year 1, continued

Although we've been successful in mitigating many barriers, some practical considerations and academic requirements that DIRECTLY impact transfer students fall outside of our scope:

- Cadence of course offerings to transfer
- Limited acceptance of transfer credits
- Competitive admissions
- Students' resource constraints
- Transfer Institution Policies (only X number of transfers accepted, for ex)

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Year 2

- Year 2 Application is open through August 2
- Interviewing for 60 spots this year (15 min slots)
- Program will start the week before CCC Fall semester with Orientation

Questions?

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References

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- Stevens, J. (2021). Community colleges are still wasting Black and Latino students' time. EdSource.
- U.S. Government Accountability Office. (2017). Higher Education: Students Need More Information to Help Reduce Challenges in Transferring College Credits. GAO: 17-574.
- Jenkins, D., & Fink, J. (2016). Understudied barriers to transfer. Inside Higher Ed.
- Dembicki, M. (2022). DataPoints: Enrollment by Ethnicity. Community College Daily.
- Additional Research that Informed CSSA 2024 available

CS Starter Academy

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