



Indiana Department of Education

Dr. Katie Jenner, Secretary of Education

To: Mike Braun, Governor of Indiana; Dr. Katie Jenner, Secretary of Education

From: Anna Shults, Chief Academic Officer

Date: July 15, 2025

Subject: Next Level Computer Science Program Biannual Report - July 2025

Background

Indiana Code (IC) 20-20-45 established the Next Level Computer Science (CS) Grant Program and Computer Science Fund to award grants to eligible entities to implement high-quality teacher professional development programs in CS. The Indiana Department of Education (IDOE) is charged to administer the program and fund, as well as develop grant guidelines in collaboration with the Governor's office.

IC 20-20-45-12 requires IDOE to biannually submit a progress report to the Governor regarding the:

1. Development and administration of the program and fund; and
2. Status of public schools in meeting CS curriculum requirements.

Development and Administration of the Program and Fund Timeline

February 2024 IDOE awards \$1.7 million in grants from the Next Level CS Fund to higher education institutions and nationally-recognized organizations providing high-quality professional development through the Designing for Impact Next Level CS Grant program. Individual awards were determined through outcomes and alignment to the grant application and design.

March 2024 IDOE collaborates with Nextech to evaluate ongoing needs and develop strategies to deliver targeted resources to K-8 CS educators.

- April 2024** IDOE awards \$1 million through the Designing for Impact: Next Level CS Grant program to two postsecondary institutions and two organizations offering nationally recognized, high-quality CS professional development. This grant aims to expand access to quality CS education for all Indiana students.
- May 2024** IDOE collaborates with Nextech and the National Computer Science Teachers Association (NSTA) to host the third annual Indiana CSPDWeek for over 400 Indiana K-12 educators in Bloomington, with Secretary of Education Dr. Katie Jenner as the keynote speaker.
- June 2024** The 17 awardees of the inaugural CS Catalyst Grant used grant funding to expand CS learning opportunities and strengthen regional partnerships to support program sustainability, specifically through teacher CS professional development programs and the implementation of successful CS curricular programs.
- July 2024** IDOE announces the 54 awardees for the 2024-2025 STEM Integration Grant. This highly-competitive grant is designed to enhance student success by accelerating exposure to and learning in the Science, Technology, Engineering, and Mathematics (STEM) disciplines in alignment with Indiana’s Priorities for STEM Education and the implementation of the 2023 Indiana Academic Standards for Integrated STEM. More information and the list of grant recipients are outlined in this memo.
- IDOE delivers the IC 20-20-25 biannual report to the Governor’s Office, Indiana General Assembly, Indiana Commission for Higher Education (CHE), and the Indiana State Board of Education.
- August 2024** Pursuant to IC 20-32-4-18, IDOE and CHE defines guidance to support schools in the implementation of the CS course graduation requirement, identifying the Next Level Programs of Study (NLPS) course Computing Foundations for a Digital Age and other eligible courses to accommodate new pathways.
- October 2024** The 2024 State of Computer Science Education Report from Code.org recognizes Indiana as one of 11 states that has a CS graduation requirement. Indiana ranks seventh in the nation in access to CS courses at the high school level, with 88% of public high schools offering a foundational CS course.

- December 2024** NexTech begins facilitating professional development for NLPS course 4565 Computing Foundations for a Digital Age for 110 educators, preparing Indiana teachers to support students foundational digital literacy and graduation goals in the implementation of the CS graduation course requirement.
- January 2025** IDOE delivers the IC 20-20-45 biannual report to the Governor’s Office, Indiana General Assembly, Indiana Commission for Higher Education, and the Indiana State Board of Education.
- April 2025** IDOE and CHE issue [Final Course Eligibility](#) guidance regarding those NLPS-aligned courses that fulfill the Computer Science graduation requirement.
- June 2025** IDOE collaborates with Nextech and the National Computer Science Teachers Association (CSTA) to host the fourth annual Indiana CSPDWeek for over 400 Indiana K-12 educators in Bloomington. Teacher training equips K-5 teachers to integrate Computer Science standards into their practice and prepares dozens of educators to teach the NLPS-aligned 4565 Computing Foundations for a Digital Age course.
- Data Science 4 Everyone (DS4E) awards IDOE a grant to conduct an Indiana Data Science summit later in 2025, convene stakeholders from K-12 education, academic, government and industry to identify Data Science needs in K-12 Indiana curriculum and chart a path toward further integration of Data Science skills.

Provider Training Overviews

Since June 1, 2018, over 6,800 Indiana K-12 educators received CS training through partnerships between IDOE and eligible entities pursuant to IC 20-20-45. The following information reflects IDOE’s current partnerships. Refer to Appendices A-E for training partner contracts.

BloomBoard, Inc. is committed to creating and providing professional learning pathways that help educators acquire transferable credentials and licensing opportunities to enhance instructional design. BloomBoard, Inc. currently supports 28 Indiana educators through 10 training courses, enabling them to earn micro-credentials in CS content and practice. These educators can accumulate micro-credentials toward earning a master’s degree in Technology and Computer Science Education from a partnering higher education institution. As of July 2025, 26 Indiana educators have completed the credentialing program. The following table summarizes educator participation in BloomBoard, Inc.’s two spring 2025 cohorts.

BloomBoard, Inc. Training Numbers						
Cohort	Educators	Course	Seats			
			Spring Term I (January - February 2024)	Spring Term II (March - April 2024)	Fall Term (August - December 2024)	Spring Term (January - May 2025)
Cohort 1	25	EDUC 5173 Computing Systems and Basic Programming	8	1	0	0
		EDUC 5263 Cybersecurity	15	0	7	0
		EDUC 5273 Pedagogical Practices that Support CS Learning 1	9	5	8	0
		EDUC 5253 Integrating Computer Science Practices	0	9	0	0
		EDUC 5793 Capstone	0	14	7	0
		EDUC 5283 Pedagogical Practices that Support CS Learning 2	4	9	0	8
		EDUC 5293 Promoting Inclusive Practices in Computer Science	9	4	0	8
Cohort 2	8	EDUC 5243 Foundations of Computer Science Instruction	8	0	0	0
		EDUC 5153 Computing and Society	0	8	0	0
		EDUC 5163 Computational Thinking	0	8	7	0
		EDUC 5253 Integrating CS Practices	0	0	7	0
		EDUC 5273 Educational Practices that Support CS Learning I	0	0	7	0
		EDUC 5173 Computing Systems and Basic Programming	0	0	7	0
		EDUC 5283 Pedagogical Practices that Support CS Learning 2	0	0	0	6
		EDUC 5293 Promoting Inclusive Practices in Computer Science	0	0	0	6
		EDUC 5793 Capstone	0	0	0	6

Total Enrollment	33	10	53	58	50	34
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Indiana University (IU) conducted an extensive Building Capacity for Preservice Computer Science Education project, which aimed to enhance and strengthen the impact of Indiana computer science learning opportunities for Indiana students in preschool through grade 12. It provided opportunities for preservice and in-service teachers to increase their CS pedagogical knowledge and ability to implement authentic problem-solving using computing to address or improve systems and circumstances in local communities. In the first half of 2025, IU hosted a series of workshop-based professional development opportunities as well as a CS cohort of elementary preservice teacher educators.

Part I: Workshop-Based Professional Development

IU CS Training Numbers		
Workshop Name	Workshop Description	Total Trained January – June 2025
Rethinking Circle Time (ReCT)	ReCT discusses how computational thinking concepts, which include pattern recognition, abstraction, decomposition, algorithm design, and debugging, can be integrated into K-2 literacy classes. The workshop provides various examples of computational thinking activities, including unplugged, plugged, embodied, and Scratch Jr., using manipulatives such as picture cards, direction cards, and circle diagrams.	28*
Primary AI	Artificial intelligence (AI) has become a fundamental technology with a transformative impact on our society. Primary AI is a teacher training workshop targeting students in grades 4-6. It presents a comprehensive AI and science curriculum integrated with an immersive learning environment, including various AI concepts such as perception, planning, robotics, machine learning, and ethical considerations related to AI.	65*
CSforSocialGood	CSforSocialGood emphasizes how CS can improve social good. It adopts problem-based learning (PBL) and integrates block coding to engage learners with real-world problems. The workshop introduces unplugged (sorting cards) and plugged activities (Scratch) that teachers can use for teaching middle school and grade six students.	22
AI Goes Rural	AI Goes Rural is an introductory training course regarding AI designed to emphasize the importance of visualization and representation with computers, how computers perceive and learn from data, provide opportunities for learners to apply AI concepts to real-world applications, and consider the ethical implications of AI. It targets teachers interested in teaching grades six through eight with fundamental AI concepts.	65*

IU CS Training Numbers		
Workshop Name	Workshop Description	Total Trained January – June 2025
Introduction to CS	The workshop is designed for preservice teachers to understand basic CS concepts. With Indiana’s adoption of CS standards within the Indiana Academic Standards for Science, it is vital that those entering the teaching profession have a basic knowledge and understanding of related topics. Topics addressed in the unit include CS history and stereotypes, computational thinking concepts, computer science integration across the disciplines, particularly for creativity and problem-solving, machine learning and AI, and the societal impacts of CS.	84*
Data Science in Education	The combination of CS, mathematics/statistics, and domain application is data science. Data science is a field that transforms data into numbers that can be analyzed and interpreted for different areas of study. The workshop aims to promote educators' understanding of the nature of data and AI so that they can utilize data to improve their teaching and implement data inquiry lessons to build students' data literacy. The target learners of this workshop are preservice teachers.	59*
Total Educators Impacted		127

* Topics combined with different sessions based on faculty members’ requests.

IU CS Training Numbers					
Date	Location	Workshop Length	Professional Development	Number of Preservice Teachers	Number of Faculty Members
January 13, 2025	Indiana Learning Lab (online)	30 minutes	<ul style="list-style-type: none"> CS for Social Good - Integrating CS and Problem-Based Learning 	Pageviews through June 30th: 270	
January 20, 2025	Indiana Learning Lab (online)	30 minutes	<ul style="list-style-type: none"> CS Unplugged 	Pageviews through June 30th: 253	
February 10, 2025	Indiana Learning Lab (online)	30 minutes	<ul style="list-style-type: none"> Introduction to Computational Thinking (CT) - CT Integration (Elementary Grade Levels) 	Pageviews through June 30th: 176	
February 17, 2025	Indiana Learning Lab (online)	30 minutes	<ul style="list-style-type: none"> Introduction to AI in Education - Understanding How AI Works and Ethics 	Pageviews through June 30th: 139	
February 13, 2025	Indiana University Southeast	1 hour	<ul style="list-style-type: none"> CS & Computational Thinking Integration into K-2 Literacy 	15	0
February 18, 2025	Vincennes University	6 hours	<ul style="list-style-type: none"> CS Integration 	22	1

IU CS Training Numbers					
Date	Location	Workshop Length	Professional Development	Number of Preservice Teachers	Number of Faculty Members
March 4, 2025	Indiana University Northwest	3 hours	<ul style="list-style-type: none"> Introduction to CS Education in Indiana Schools AI & Data Science in Education 	24	2
April 11, 2025	Indiana University Indianapolis	4 hours	<ul style="list-style-type: none"> BCPCS Summit 	N/A	36 ^a
April 14, 2025	Grace College	3 hours	<ul style="list-style-type: none"> Introduction to CS Education in Indiana Schools AI & Data Science in Education 	10	1
May 15, 2025	Ivy Tech Terre Haute	3 hours	<ul style="list-style-type: none"> Introduction to CS Education in Indiana Schools Computational Thinking Integration in K-5 subject areas AI in Education 	13	1
June 16-20, 2025	Indiana University Bloomington	5 full days	CSPD Week <ul style="list-style-type: none"> Monday & Friday: 3-hour session Tuesday to Thursday: 6-hour PD sessions, 2-hour reflection & debrief 	N/A	18
June 19, 2025	Indiana University Bloomington	3 hours	<ul style="list-style-type: none"> Empowering The Future: The Role of AI in K-12 Education 	18 in-service teachers	8
June 19, 2025	Indiana University Bloomington	3 hours	<ul style="list-style-type: none"> Future-Ready Learning: Integrating Data Science into Everyday Teaching 	25 in-service teachers	3
Total				127^b	36^c

^a Preservice teacher educators from these universities attended: Ball State University, Franklin College, Indiana State University, IU Bloomington, IU Kokomo, IU Northwest, IU Southeast, Ivy Tech Community College Terre Haute, Manchester University, Marian University, Purdue University, Purdue University Fort Wayne, University of Evansville, University of Saint Francis, University of Southern Indiana, and Vincennes University.

^b Total numbers include in-service teachers, but did not include the pageviews from Indiana Learning Lab.

^c Some faculty members joined the training more than two times.

Part 2: CS Cohort for Elementary Preservice Teacher Educators

As part of the Building Indiana Computing Capacity (IC2) for Indiana Preservice CS Education project, IU initiated the CS Cohort of Elementary Teacher Educators in the spring of 2024. In the second year of the cohort, IU collaborated with 24 faculty members from 12 elementary teacher preparation programs across Indiana. 14 faculty members returned from last year alongside 10 new participants.

The goals of this year’s Cohort were to establish and foster the CS professional learning community, to explore and expand the knowledge of CS education in preservice teacher preparation programs, and to integrate that knowledge into courses, curriculum, and programs. The program included synchronous online sessions and in-person activities from February 2025 to June 2025. The CS cohort members completed 7.5 hours of synchronous online sessions each month. Each session lasted 1.5 hours. In-person sessions were held during the BCPCS Spring Summit for four hours and CSPDWeek for five full days. The session objectives were:

- February 18 (online) - Introduce CS Cohort, setting goals, and CS standards
- March 18 (online) - Introduce tuning protocol for presenting CS lesson designs
- April 11 (in-person) - BCPCS Summit: share tuning protocols with BCPCS team and other faculty members outside of CS Cohort
- April 15 (online) - Reflect on summit experience
- May 20 (online) - Create CS modules and CS special interest group discussion
- CSPDWeek (in-person) - Participate in teacher PD sessions, present CS modules, network and reflect on the cohort experience

IU also provided CS-related resources for the cohort members to review. Some of the topics covered and discussed include:

- CS & CS Visions
- CS Standards and Framework
- Programing and Coding Workshops
- CS Curriculum and Resources for K-5
- CS Integration
- CS in Elementary Teacher Preparation Programs

18 of the cohort members stayed in Bloomington to participate in CSPDWeek. Participation included sessions organized by IU and CSPDWeek partners. In total, cohort members attended 21 hours of professional development sessions, six hours of cohort sessions, and six hours of networking and reflection sessions from Monday, June 16, through Friday, June 20. Additional details and the summary of cohort activities are delineated below.

IU CS Cohort Activities Summary			
Represented Universities	Participants	CS Cohort Activities February – May 2025	CS Cohort Activities June 2025
<ul style="list-style-type: none"> ● Ball State University ● Indiana University Kokomo ● Indiana University Southeast 	24 faculty members of elementary	<p style="text-align: center;">February</p> <ul style="list-style-type: none"> ● Setting goals 	<p style="text-align: center;">CSPDWeek</p> <ul style="list-style-type: none"> ● 21 hours of in-person

IU CS Cohort Activities Summary			
Represented Universities	Participants	CS Cohort Activities February – May 2025	CS Cohort Activities June 2025
<ul style="list-style-type: none"> Ivy Tech Community College - Muncie Manchester University Marian University Purdue University Purdue University Fort Wayne University of Evansville University of Saint Francis University of Southern Indiana Vincennes University 	teacher preparation programs	<p>March</p> <ul style="list-style-type: none"> CS lesson design ideas <p>April</p> <ul style="list-style-type: none"> Presenting ideas through tuning protocol Revising the lesson design <p>May</p> <ul style="list-style-type: none"> CS modules Special interest groups 	<p>professional development sessions</p> <p>CS Cohort</p> <ul style="list-style-type: none"> Six hours of in-person sessions Six hours of networking and collaboration time

CodeHS has partnered with IDOE since 2020 to consistently deliver high-quality and engaging professional learning experiences. From January to July 2025, over 100 Indiana teachers solidified best practices in CS instruction through a wide variety of professional development options ranging from developing computational thinking skills to learning new programming languages to integrating computer science into core subjects. Through the Designing for Impact Next Level Computer Science Grant, K-12 educators have access to CodeHS, Inc’s one-day workshops, bootcamps, and PD offerings. 52 Indiana teachers received their professional development in programs supported by the Designing for Impact Next Level Computer Science Grant.

CodeHS CS Training Support from Designing for Impact Next Level Computer Science Grant		
Workshop	Description	Total Trained January - June 15, 2025
Middle School Workshop for Anderson Community Schools	Teachers prepare to teach Indiana middle school computer science with CodeHS by exploring the course standards and fully-aligned curriculum. Educators review the syllabus and course projects, participate in a model lesson being taught, and then review the curriculum resources available (including lesson plans, problem guides, and teacher video resources). Teachers then prepare to teach the course by configuring their course and sections, and reviewing teacher tools for tracking, grading, and academic integrity	10
Getting Started Teaching with CodeHS (open to MS and HS teachers)	Educators participate in a four-week hybrid learning experience including asynchronous skill building with Java and an option to participate in a weekly live session with CodeHS facilitators. Educators learn effective instructional strategies, specific content knowledge, assessment, and differentiation strategies.	12
Enhancing Elementary ELA with Coding	This workshop was offered in partnership with Nextech and was a continuing education opportunity for 2024 IN CSPD Week attendees. This session introduced computational thinking practices	17

CodeHS CS Training Support from Designing for Impact Next Level Computer Science Grant		
Workshop	Description	Total Trained January - June 15, 2025
	in connection with elementary ELA standards to help integrate coding into their ELA instruction. Teachers explored elementary lessons that integrate coding and 3rd grade ELA standards and prepared to teach coding within their ELA instruction.	
Data Science Workshop (Indiana CSPD Week 2025)	CodeHS facilitated a five-day in-person professional development session focused on the CodeHS Data Science with Python course. The PD was designed to help high school educators build confidence and instructional capacity in teaching data science. Educators engaged in a hands-on exploration of the CodeHS platform, completing lessons from three core units: “What is Data Science?”, “Data Science for Change,” and “Data Storytelling.” They reviewed key instructional tools such as the project rubric, pair programming guide, and multiple sandbox environments tailored for data analysis and Python review. Throughout the week, participants worked with student-friendly datasets and were introduced to real-world data sources. On Day 4, they began a Hackathon project that culminated in peer presentations on Day 5, showcasing data storytelling and analysis techniques.	13
Total Educators Impacted		52

Nextech is a nonprofit dedicated to providing access to CS education for all K-12 students in Indiana through its mission to ensure every student has the opportunity to develop essential tech skills, preparing them for future careers in an increasingly digital world. Through its partnership with IDOE, Nextech has offered a range of programs, including teacher training, student coding competitions, and immersive learning experiences.

During the 2024-2025 contract, Nextech supported IDOE in ensuring K-12 educators have access to a variety of computer science professional development opportunities as well as access to ongoing collaboration and support. Nextech did this by completing the following three tasks:

- Task 1: Developed a comprehensive menu of options and ran multiple intensive computer science professional development sessions;
- Task 2: Developed and implemented a menu of options for embedded computer science professional development; and
- Task 3: Developed and implemented the following initiatives to help create, support, and empower a network of CS educators statewide:
 - Book Studies for Educators
 - Computer Science (CS) Bytes

- STEM for Elementary Grade Praxis
- Professional Learning Communities

Nextech Contract #3 - CS Training Numbers				
Workshop	Description	Total Trained January 1, 2024 - June 30, 2024	Total Trained July 1, 2024 - December 31, 2024	Total Trained January 1, 2025 - June 30, 2025
Principles of Computing	One-day workshop focusing on professional development for teachers seeking to align curriculum to Next Level Programs of Study (NLPS) 7183 Principles of Computing.	27*	1	0
WeTeach CS Certification Prep Course	Immersive four-day course designed to provide an overview of the educator competencies to become endorsed to teach CS in Indiana.	26	15	0
CS Principles	Nine-day professional development experience for high school teachers including five-day, intensive training in the summer followed by quarterly workshops during the school year.	14	0	10
CS Discoveries	Nine-day professional development experience for middle and high school teachers including five-day, intensive training in the summer followed by quarterly workshops during the school year.	42	0	15
CSA	Nine-day professional development experience for high school teachers including five-day, intensive training in the summer followed by eight workshops throughout the school year.	4	0	4
Topics in CS	Two-day intensive professional development to provide training for the NLPS course 7351 Topics in Computer Science.	6	0	11

Nextech Contract #3 - CS Training Numbers				
Workshop	Description	Total Trained January 1, 2024 - June 30, 2024	Total Trained July 1, 2024 - December 31, 2024	Total Trained January 1, 2025 - June 30, 2025
Unpacking CS Indiana Academic Standards	One-day or six-hour workshop for K-8 teachers seeking to understand the updated Indiana Academic Standards for CS.	20	0	23
Integrating / Incorporating CS in K-5 Classroom	One-day or six-hour workshop for elementary school educators to help integrate CS into existing K-5 coursework.	7	19	36
Integrating / Incorporating CS in 6-8 Classroom	One-day or six-hour workshop for middle school educators to help integrate CS into existing 6-8 coursework.	15	0	7
Integrating CS in Middle School (6-8) Deep Dive	One- or two-day workshop for middle school teachers interested in taking a deeper dive.	10	0	19
Integrating CS in 9-12 using AI / AI 101: Incorporating Artificial Intelligence in Your 9-12 Classroom	One-day or six-hour workshop for educators to help connect AI concepts in the high school classroom.	86	39	17
Integrating CS in K-8 using AI / AI 101: Incorporating Artificial Intelligence into Your K-8 Classroom	One-day or six-hour workshop for educators to help connect AI concepts in the K-8 classroom.	109	7	13
CS Fundamentals	One-day or six-hour workshop for K-5 teachers to help become familiar with CS.	25	41	30
CS Fundamentals Deep Dive	One-day or six-hour workshop for K-5 teachers to help create a plan to teach CS fundamentals.	9	12	28

Nextech Contract #3 - CS Training Numbers				
Workshop	Description	Total Trained January 1, 2024 - June 30, 2024	Total Trained July 1, 2024 - December 31, 2024	Total Trained January 1, 2025 - June 30, 2025
Counselors for Computing	One-day or six-hour workshop for school counselors to help broaden their understanding of CS.	17	0	8
K-5 Hands on CS	Five-day, intensive hands-on experience with a menu of professional development options aligned to grade level, with eight optional follow-up workshops throughout the school year.	149	0	129
AI 101: Incorporating Artificial Intelligence in Your K-5 Classroom	One-day or six-hour workshop for educators to help connect AI concepts in the K-5 classroom.	0	32	23
AI 101: Incorporating Artificial Intelligence in Your 6-8 Classroom	One-day or six-hour workshop for educators to help connect AI concepts in the 6-8 classroom.	0	14	13
Incorporating Computer Science in Your K-5 Classroom Deep Dive	One-day or six-hour workshop for educators to help connect AI concepts in the K-8 classroom.	0	19	0
Bootstrap Data Science	Bootstrap:Data Science is a curricular module for students in grades 6-12, which teaches students to answer real-world questions using data analysis.	0	13	0
AI Literacy for Educators	One-day or six-hour workshop for educators to focus on their AI Literacy.	0	39	275
Website and Database Development	Two-day workshop for educators teaching the Website and Database Development course.	0	4	0

Nextech Contract #3 - CS Training Numbers				
Workshop	Description	Total Trained January 1, 2024 - June 30, 2024	Total Trained July 1, 2024 - December 31, 2024	Total Trained January 1, 2025 - June 30, 2025
Computing Foundations for a Digital Age (4565)	This workshop will focus on teachers planning on teaching Computing Foundations for a Digital Age in the spring semester of the 2024-25 school year or the fall of the 2025-26 school year.	0	0	110
Totals		539	255	771

*This workshop was included in the December 2023 report and was moved to May 2024.

Rose-Hulman Designing for Impact Program

The *Designing for Impact: Next Level CS* program addresses the following grant strands by implementing a series of professional development workshops that intend to equip educators with the skills and resources needed to bring CS into any classroom setting, regardless of subject area. This initiative aligns with our mission to empower K-12 educators with innovative teaching practices by providing immersive, high-quality professional development experiences.

Integrating CS education into K-12 curriculum and providing meaningful opportunities for K-12 educators to develop their skills in this area can be highlighted as follows:

- Emphasizing the Importance of CS Integration
- Comprehensive Integration Through an Integrative Pedagogical Approach
- Empowering Through Expert-Led Workshops
- Empowerment for Effective Classroom Implementation

By integrating these CS principles into other subjects, educators provide K-12 students with a well-rounded education that prepares them for the dynamic challenges of today's world.

Rose-Hulman Designing for Impact Program - July 2024 – June 2025					
Workshop	Date(s)	Grade Band	Duration	Objectives	Size
Integrating AI Technology and Tools for K-12	January 25, 2025	K-8	One-day (six hours)	After the workshop, the K-12 educators will be able to: <ul style="list-style-type: none"> ● Integrate AI-generated graphics seamlessly into their curriculum ● Design engaging lesson plans and classroom activities using AI graphics 	18

				<ul style="list-style-type: none"> • Apply computational thinking skills to enhance instructional practices • Promote digital literacy and 21st-century skills among students • Share best practices for integrating AI graphics in educational settings • Empower students to become critical thinkers through the use of AI graphics • Adjust teaching strategies based on student engagement and learning outcomes 	
Integrating AI Technology and Tools for K-12	February 8, 2025	K-8	One-day (six hours)	<p>After the workshop, the K-12 educators will be able to:</p> <ul style="list-style-type: none"> • Integrate AI-generated graphics seamlessly into their curriculum • Design engaging lesson plans and classroom activities using AI graphics • Apply computational thinking skills to enhance instructional practices • Promote digital literacy and 21st-century skills among students • Share best practices for integrating AI graphics in educational settings • Empower students to become critical thinkers through the use of AI graphics • Adjust teaching strategies based on student engagement and learning outcomes 	10
Integrating CS Principles with Virtual Reality	February 15, 2025	6-12	One-day (six hours)	<p>After the workshop, the K-12 educators will be able to:</p> <ul style="list-style-type: none"> • Understand fundamental CS principles and their relevance in virtual reality (VR) integration • Explore the application of VR as a tool to teach CS concepts effectively • Develop skills in integrating VR experiences into CS curriculum, aligning with CS standards • Design VR-based CS lessons and activities that promote computational thinking and problem-solving skills • Collaborate with peers to create sample VR-enhanced CS lessons and units 	14
Cybersecurity	March 1, 2025	6-12	One-day (six hours)	<p>After the workshop, the K-12 educators will be able to:</p> <ul style="list-style-type: none"> • Use basic computer programming skills that will enable them to apply 	10

				<p>program design principles to their own specific disciplines</p> <ul style="list-style-type: none"> • Write computer programs to solve small problems with specific requirements • Read and understand computer code and identify the end outcome of a program • Design and implement a Graphical User Interface (GUI) that accepts user inputs and displays outcomes of computations back to them • Develop web applications that can be used to illustrate scientific and field-specific concepts in a visual manner • Explore ways in which computer-aided design can help improve student learning in the classroom • Develop basic cybersecurity skills to promote cyber hygiene and safe Internet use 	
Robotics Programming	March 15, 2025	K-8	One-day (six hours)	<p>K-12 educators will be able to apply the following concepts to programming robotics:</p> <ul style="list-style-type: none"> • Variables and assignments • Arithmetic and logical expressions • Input from sensors and the human operators of the robots • Output to the human operators in the form of text, lights, music and spoken language • Conditional behavior, especially behavior conditional on sensor readings • Iterative behavior (loops), using both FOR and WHILE statements • Container constructs like lists, arrays and dictionaries • Event-driven programming, including the wait-for-event pattern 	17

<p>FlowerBot Micro Bit Workshops</p>	<p>April 14, 2025</p>	<p>K-8</p>	<p>One-day (six hours)</p>	<p>After the workshop, the K-12 educators will be able to:</p> <ul style="list-style-type: none"> ● Use TinkerCad to build basic electronic circuits and write graphical code ● Build basic electronic circuits on a breadboard ● Create a flowchart or pseudocode to plan out a computer program ● Write programs for electronic circuits to play a buzzer, light an LED, detect light, use sonar to detect objects, and create robot behaviors 	<p>15</p>
<p>FlowerBot Circuit Playground Express Workshops</p>	<p>April 15, 2025</p>	<p>K-8</p>	<p>One-day (six hours)</p>	<p>After the workshop, the K-12 educators will be able to:</p> <ul style="list-style-type: none"> ● Use TinkerCad to build basic electronic circuits and write graphical code ● Build basic electronic circuits on a breadboard ● Create a flowchart or pseudocode to plan out a computer program ● Write programs for electronic circuits to play a buzzer, light an LED, detect light, use sonar to detect objects, and create robot behaviors 	<p>17</p>
<p>CS & Healthcare</p>	<p>April 19, 2025</p>	<p>K-12</p>	<p>One-day (six hours)</p>	<p>After the workshop, the K-12 educators will be able to:</p> <ul style="list-style-type: none"> ● Understand the role of computer science in health science education and its real-world applications in healthcare ● Apply practical skills in data analysis and visualization to enhance instruction in health-related topics ● Identify opportunities and strategies for integrating computer science principles into the health science curriculum ● Access and utilize resources and tools that support continued professional growth and classroom implementation ● Confidently integrate computer science concepts into secondary-level health science education 	<p>13</p>

<p>Integrating CS in Any Classroom</p>	<p>June 2, 2025</p>	<p>6-12</p>	<p>One-day (six hours)</p>	<p>After the workshop, the K-12 educators will be able to:</p> <ul style="list-style-type: none"> • Identify opportunities for integration, research relevant resources, and build a computing lesson plan • Incorporate best practices in teaching computing, field test the lesson, and reflect on the field test • Share and collaborate with colleagues, evaluate student learning in computing, and plan for future integration 	<p>17</p>
<p>Python</p>	<p>June 4, 2025</p>	<p>K-12</p>	<p>One-day (six hours)</p>	<p>After the workshop, the K-12 educators will be able to:</p> <ul style="list-style-type: none"> • Understand and explain basic programming concepts through hands-on coding activities • Generate and discuss ideas for applying programming in their own teaching contexts • Collaborate with peers and facilitators to develop and refine lesson plans or classroom activities • Create practical instructional materials such as demos, student exercises, or project outlines • Build and test simple prototypes or proofs of concept related to their instructional goals • Engage confidently with programming content regardless of prior experience • Access and utilize resources for continued learning and classroom integration of programming skills • Explore and apply advanced Python programming concepts relevant to high school curricula (for applicable participants) • Understand and explain basic programming concepts through hands-on coding activities 	<p>14</p>

<p>Cybersecurity</p>	<p>June 5, 2025</p>	<p>6-12</p>	<p>One-day (six hours)</p>	<p>After the workshop, K-12 educators will be able to:</p> <ul style="list-style-type: none"> ● Use basic computer programming skills that will enable them to apply program design principles to their own specific disciplines ● Write computer programs to solve small problems with specific requirements ● Read and understand computer code and identify the end outcome of a program ● Design and implement a Graphical User Interface (GUI) that accepts user inputs and displays outcomes of computations back to them ● Develop web applications that can be used to illustrate scientific and field-specific concepts in a visual manner ● Explore ways in which computer-aided design can help improve student learning in the classroom ● Develop basic cybersecurity skills to promote cyber hygiene and safe Internet use 	<p>16</p>
<p>Python</p>	<p>June 6, 2025</p>	<p>K-12</p>	<p>One-day (six hours)</p>	<p>After the workshop, the K-12 educators will be able to:</p> <ul style="list-style-type: none"> ● Understand and explain basic programming concepts through hands-on coding activities ● Generate and discuss ideas for applying programming in their own teaching contexts ● Collaborate with peers and facilitators to develop and refine lesson plans or classroom activities ● Create practical instructional materials such as demos, student exercises, or project outlines ● Build and test simple prototypes or proofs of concept related to their instructional goals ● Engage confidently with programming content regardless of prior experience ● Access and utilize resources for continued learning and classroom integration of programming skills ● Explore and apply advanced Python programming concepts relevant to 	<p>6</p>

				<p>high school curricula (for applicable participants)</p> <ul style="list-style-type: none"> Understand and explain basic programming concepts through hands-on coding activities 	
CS & Healthcare	June 6, 2025	K-12	One-day Six-hour	<p>After the workshop, the K-12 educators will be able to:</p> <ul style="list-style-type: none"> Understand the role of computer science in health science education and its real-world applications in healthcare Apply practical skills in data analysis and visualization to enhance instruction in health-related topics Identify opportunities and strategies for integrating computer science principles into the health science curriculum Access and utilize resources and tools that support continued professional growth and classroom implementation Confidently integrate computer science concepts into secondary-level health science education 	11
Total Educators Impacted					178

Status of Public Schools Meeting CS Curriculum Requirements

Pursuant to Indiana Code (IC) 20-30-5-23, each public high school, including each charter school, shall offer at least one (1) computer science course as a one (1) semester elective in the public high school’s curriculum at least once each school year for high school students. Additionally, each public school, including each charter school, shall include computer science in the public school’s curriculum for students in kindergarten through grade 12.

High School Implementation

[Code.org](#) recognized Indiana in its 2024 State of CS Education report because 89% of Indiana’s 9th-12th grade schools offered a foundational computer science course during the 2023-2024 school year, seventh highest among the 50 states. This data was exclusively based on high schools that serve students in grades 9 through 12, and excludes career and technical education centers, alternative schools, and junior-senior high schools. Historic data tracking in previous legislated reports included all schools with at least one high school grade offered, incorporating ninth grade centers, combined junior-senior high schools, or career and technical education hubs into its tracking.

Figure 1 should be compared to Code.org’s methodology and results in its annual State of CS Report, as both measure Computer Science course offerings in schools that exclusively serve students in grades 9 through 12. Discrepancies in Figure 1 below and Code.org’s data tracking results from the changeover in course titles from the 2018 Indiana Academic Standards to the inclusion of Computer Science in NLPS Pathways. The following data tracks enrollment in NLPS-aligned courses and is a worthwhile metric for tracking future implementation of these courses. Data from the 2023-2024 school year were not included in Code.org’s State of CS Report for Indiana from 2024, and the 88% metric aligns with Code.org’s analysis of the 2023-2024 school year that will be included in their State of CS Report for 2025.

Figure 1. Indiana Public or Charter High Schools Exclusively Serving 9th-12th Grade Offering NLPS-Aligned Computer Science Courses (2018-2025). While some courses aligned with the 2018 standards continue to align with NLPS, formal NLPS adoption began with the 2022-2023 school year.

9-12 Indiana Public or Charter High Schools offering NLPS aligned Computer Science courses			
School Year	Number of Schools	Number of Schools Offering At Least One CS Course	Percentage of All Schools
2018-2019	255	111	43%
2019-2020	258	149	58%
2020-2021	264	159	60%

2021-2022	267	165	62%
2022-2023	268	214	80%
2023-2024	271	238	88%
2024-2025	281	246	88%

Figures 2-5 build on historic data compiling computer science course offerings by school. This analysis includes schools that contain students in at least one grade between grades 9 through 12. Alternative schools, junior-senior high schools, ninth grade centers, and career and technical education centers are included in this count. While collected using a different methodology than Code.org, the data below allows for trend analysis in different school environments, given its inclusion in previous legislated reports.

Figure #2. All Schools Offering a CS Course to Grade 9-12 Students

All Schools			
School Year	Number of Schools	Number of Schools Offering At Least One CS Course	Percentage of All Schools
2018-2019	536	277	52%
2019-2020	535	339	63%
2020-2021	540	354	66%
2021-2022	527	396	75%
2022-2023	547	408	75%
2023-2024	565	414	73%
2024-2025	587	445	76%

Figure #3. Traditional Public Schools Offering a CS Course to Grade 9-12 Students

Traditional Public Schools			
School Year	Number of Schools	Number of Schools Offering At Least One CS Course	Percentage of Schools
2018-2019	365	213	58%
2019-2020	366	264	72%
2020-2021	367	279	76%
2021-2022	370	310	84%
2022-2023	376	306	81%
2023-2024	382	311	81%
2024-2025	391	329	84%

Figure #4. Charter Schools Offering a CS Course to Grade 9-12 Students

Charter Schools			
School Year	Number of Schools	Number of Schools Offering At Least One CS Course	Percentage of Schools
2018-2019	52	18	35%
2019-2020	53	24	45%
2020-2021	60	26	43%
2021-2022	57	30	53%
2022-2023	60	47	78%
2023-2024	62	47	76%
2024-2025	68	52	76%

Figure #5. Non-Public Schools Offering a CS Course to Grade 9-12 Students

Non-Public Schools			
School Year	Number of Schools	Number of Schools Offering At Least One CS Course	Percentage of Schools
2018-2019	110	42	38%
2019-2020	106	47	44%
2020-2021	106	47	44%
2021-2022	93	44	47%
2022-2023	104	52	50%
2023-2024	114	53	46%
2024-2025	128	64	50%

K-8 Implementation

Limited CS-specific data existed for grades K-8 prior to the enactment of Senate Enrolled Act (SEA) 172 (2018). IDOE identified the following courses as current indicators of progress at these grade levels.

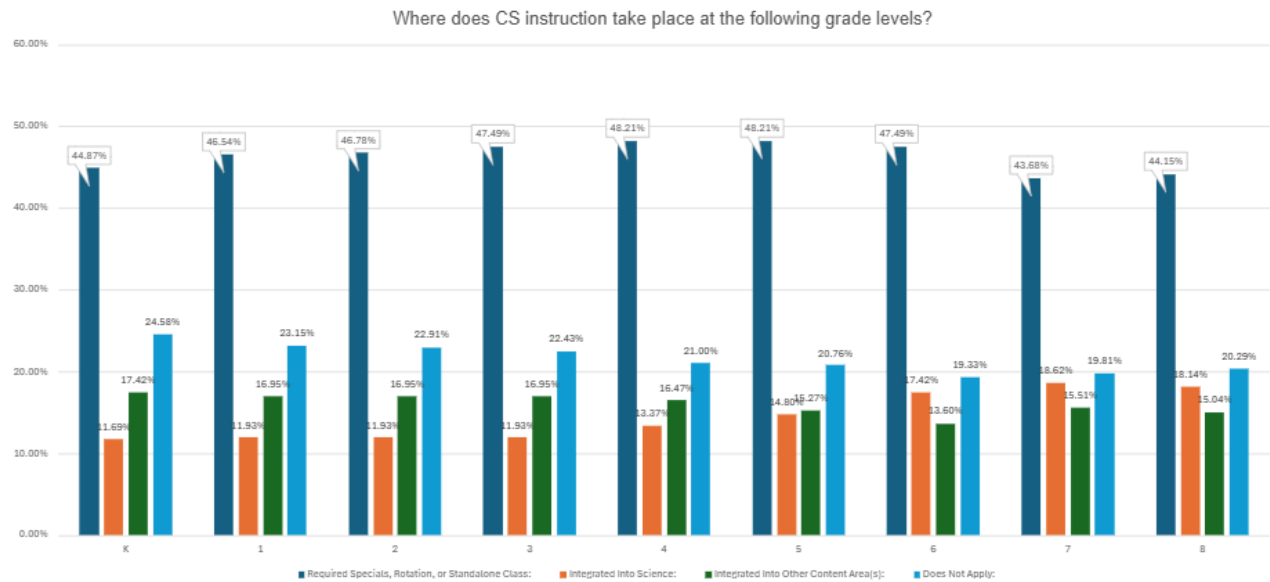
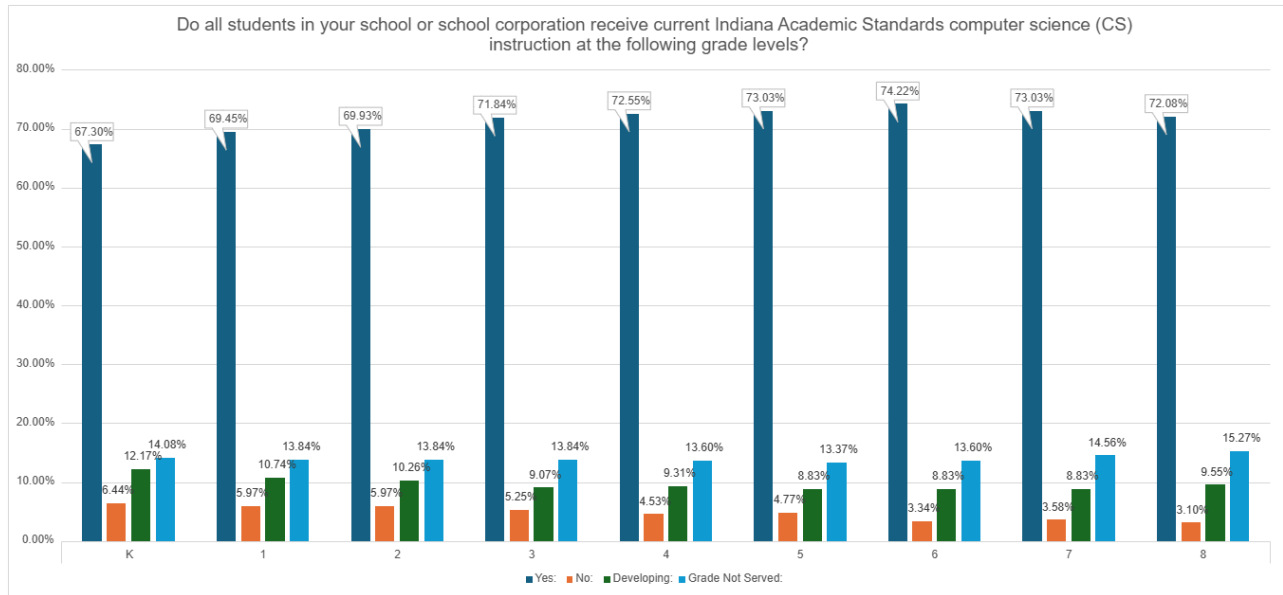
Relevant Elementary and Middle School Student Enrollment Trends *							
Course	Year						
	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
0488: Computer Science Middle Level	N/A	11,852	8,827	**	**	**	**
0488: K-2 Computer Science	N/A	N/A	31,961	47,945	59,052	64,906	72,498
0488: 3-5 Computer Science	N/A	N/A	39,223	54,566	67,151	75,930	85,697
0488: 6-8 Computer Science	N/A	N/A	26,556	39,584	42,448	46,444	48,135
4565: Computing Foundations for a Digital Age	*	*	*	*	*	*	4,225
4803: Introduction to Computer Science*	364	1,283	980	1,673	1,455	1,139	1,636

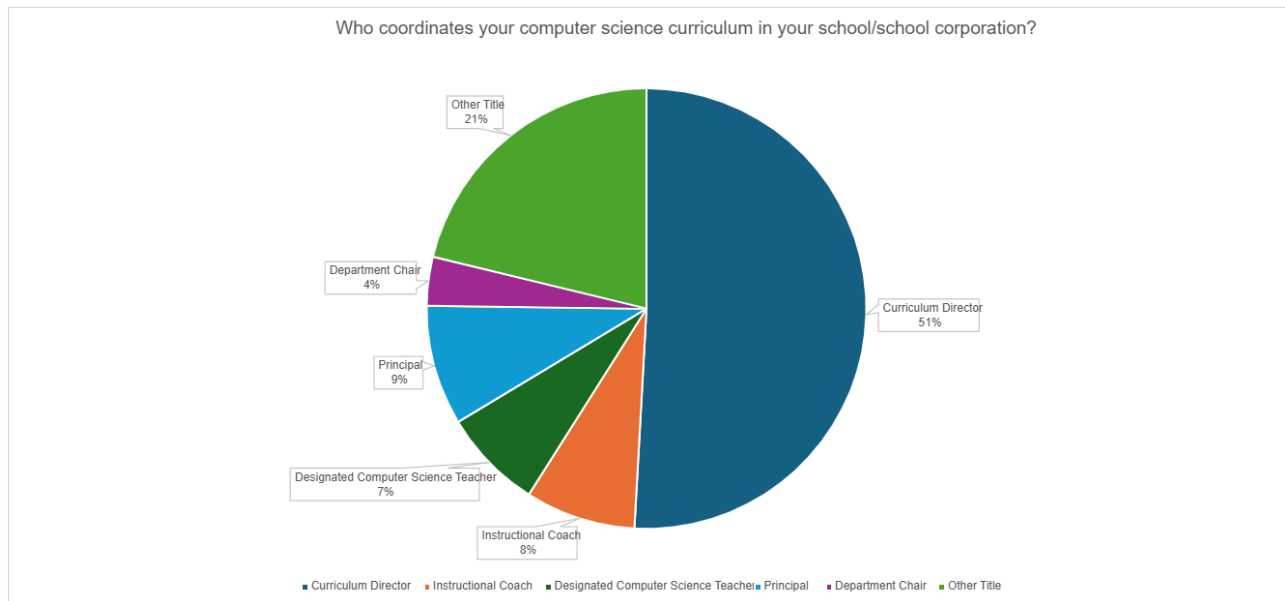
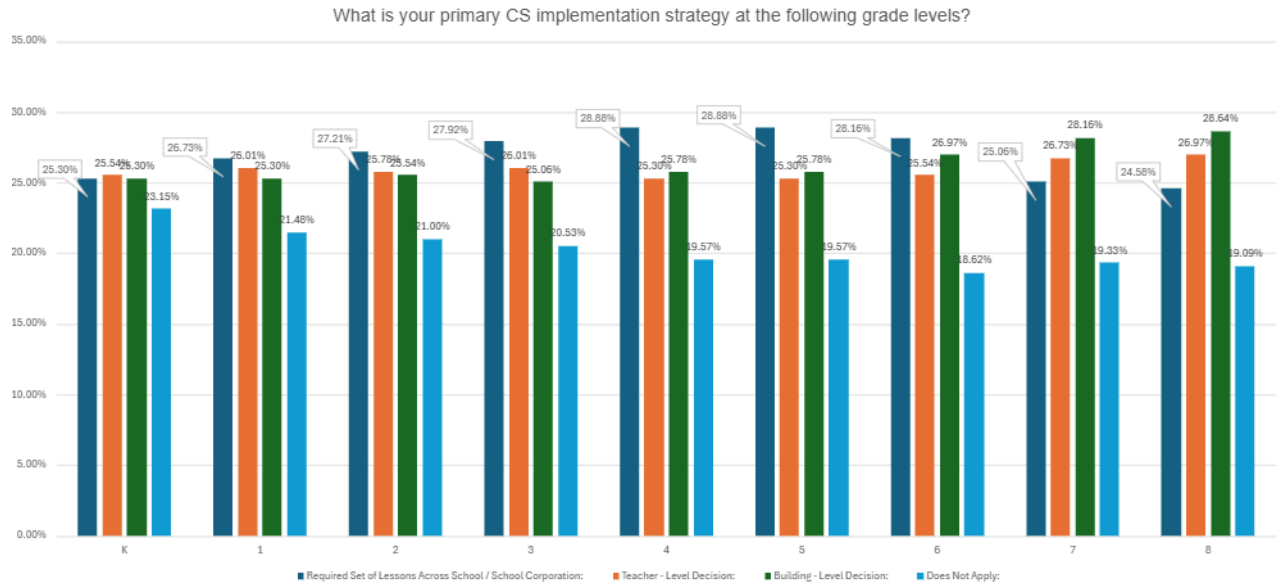
* Introduction to Computer Science was the most common early high school course until the adoption of the NLPS. With the NLPS adoption and graduation requirement, NLPS course 4565 Foundations of Computing for the Digital Age can be offered at the middle or high school level and serves as a better indicator of enrollment.

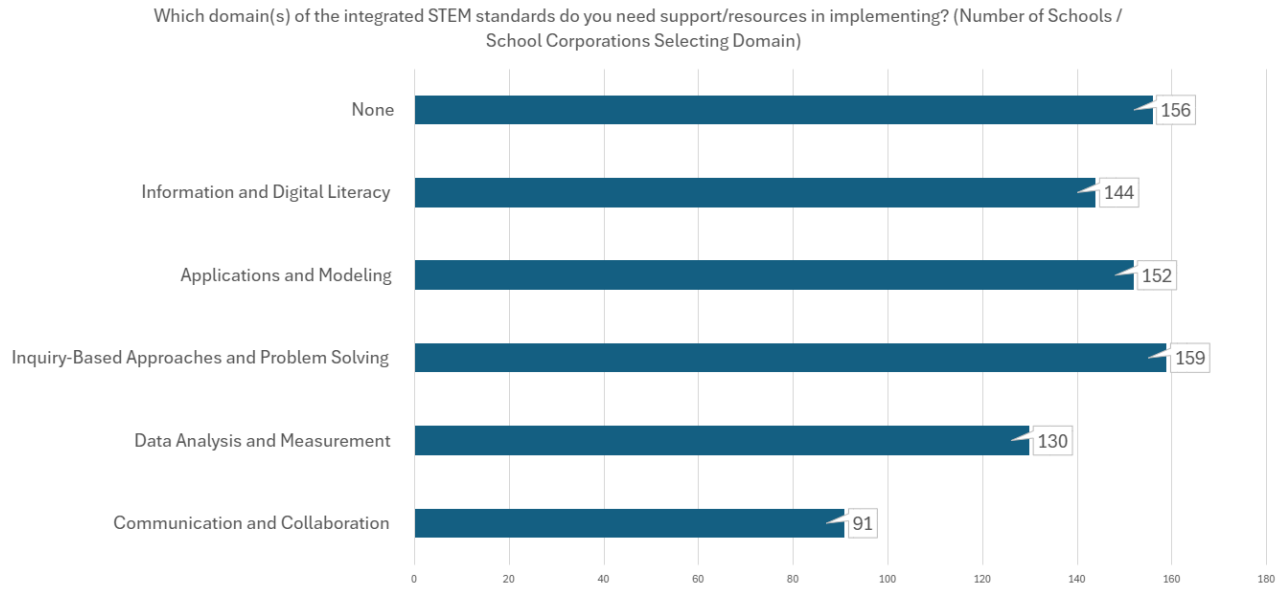
**CS Middle Level was phased out in 2021 to provide aggregated K-8 enrollment data.

Additionally, IDOE included K-8 CS-related questions in the annual Tech Plan Survey for public school corporations and charter schools in spring 2025, adding additional context from the 2024-2025 school year. The following figures provide visual representations of the survey results.

Follow up should continue as many schools implement the NLPS course 4565: Computing Foundations for a Digital Age for students enrolled in grade 8.







Statewide Detailed Secondary CS Course Completion

Figure #6 documents Computer Science course completion trends through the 2024-2025 school year for NLPS-aligned courses.

Figure 6. Computer Science (CS) Course Completion by Year

High School Enrollment		Year										
Course Code	Course Title	2016	2017	2018	2019	2020	2021	2022*	2023*	2024	2025	
4565	Computing Foundations for a Digital Age											1,961
4568	AP CS Principles	0	559	764	1,301	1,659	1,940	1,729	1,621	1,499	1,667	
4570	AP Computer Science A	958	1,070	1,098	1,180	1,247	1,025	1,009	986	1,297	1,115	
4584	IB CS Higher Level	0	0	0	0	0	0	0	0	0	0	
4586	International Baccalaureate (IB) CS Standard Level	28	33	29	30	30	34	83	3	10	7	
4803	Introduction to CS	1,428	2,446	3,553	5,357	7,585	8,068	7,824	5,880	4,570	3,805	
5252	CS: Special Topics				120	195	0	213	120	67	318	310
7179	CS: Cybersecurity Fundamentals										317	410
7183	Principles of Computing								1,625	7,071	7,364	7,835

7184	Software Development						40	193	481	620	
7243	CS: Cybersecurity Capstone								13	31	
7253	Software Development Capstone							16	98	171	
7351	Topics in CS							712	1,381	1,662	
7352	Computer Science (CS)							438	757	1,310	
7353	CS Capstone							4	24	123	
Total Enrollment		2,414*	4,108*	5,564*	8,063*	10,521*	11,280*	12,430	16,991	18,129	20,307

*The implementation of the NLPS coursework resulted in updates to the titles, competencies and pathways of CS courses. The courses that began during the 2022-2023 school year are new courses that align to the NLPS Pathways. The 2018 Indiana Academic Standards were discontinued for some computer science courses. The total for the starred values at the bottom indicates the total number of students enrolled in the listed NLPS-aligned courses. The total number of CS students in all courses for these years can be viewed in legislated reports prior to NLPS' adoption.

Plans for Continued Growth

1. Engage regional educational service centers (ESCs) in developing an outreach plan and support strategy to continue increasing access to high-quality CS curriculum and instruction.
2. Ensure timely and relevant CS professional development opportunities continue to be available for teachers of all backgrounds across all grade levels.
3. Identify additional strategies for supporting and engaging schools that are experiencing barriers to CS implementation.
4. Continue existing partnerships with organizations such as Expanding Computing Education Pathways Alliance, Computer Science Teachers of America, universities and others to continue scaling CS education across Indiana.
5. Maintain a high level of support and technical assistance for schools and corporations.
6. Evaluate potential for Data Science's interdisciplinary integration of computer science and mathematics, identifying appropriate paths for growth in Indiana.

Conclusion

Indiana is fortunate to have a legislative climate that supports the implementation and growth of CS education for all schools. This support has allowed IDOE to procure professional development partnerships, resulting in tremendous growth of CS implementation in Indiana's K-12 schools in recent years. The data and indicators outlined above demonstrate this growth and highlight areas where continued or expanded support is necessary. Successes of note include:

- 88% of public schools in Indiana exclusively serving students enrolled in grades 9-12 offered a computer science course during the 2024-2025 school year. This is up from 62% in 2018, according to Code.org's State of CS Education Report.
- Enrollment in Computer Science courses in Indiana reached a new high of over 18,000 students during the 2023-2024 school year.
- Indiana is one of five states to adopt all ten policy recommendations from Code.org's Advocacy Coalitions guidelines on building capacity.
- The 2024-2025 ILEARN science assessment continued to assess Computer Science standards.
- Career and technical education (CTE) programs of study in computer science and related fields have been aligned with postsecondary and industry credentials.

Areas for improvement and further research:

- After rising for five years and peaking at 91%, the number of public schools exclusively serving students enrolled in grades 9-12 dipped slightly during the 2023-2024 school year. Anecdotally, representatives from Code.org noted similar trends in other states.
- Changes to course titles after the adoption of the NLPS and differing parameters for classifying schools' computer science instruction have changed the techniques for data tracking. Following the adoption of a graduation requirement and an expected increase in the number of students taking the course, consistent data collection is essential to track progress and identify areas of need.
- K-8 Computer Science standards are being integrated across subjects according to a schools' or school corporations' needs, but K-8 survey data indicates that at least 15% of students in each grade level are not receiving complete instruction in the standards. Future survey questions on barriers to implementation could shed light on areas in need of resources and support.
- As the graduation requirement increases the percentage of secondary students enrolled in computer science, pathways for Computer Science teacher training and certification must be continually developed. Additional training to build educator content knowledge is needed to support increased student enrollment in more complex computer science coursework. Few pre-service certification paths exist in the state's universities.

With continued support from the Indiana General Assembly, the Governor's Office, Indiana K-12 schools, families, and other public and private stakeholders, IDOE can continue to support the expansion of CS education and opportunities for Indiana students, becoming a recognized leader in CS education across the United States.