

January 15, 2025

# Legislative Report Senior Year Plus STEM



Department of Education

State of Iowa  
Department of Education  
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## **LEGISLATIVE REQUIREMENT – IOWA CODE 261E.3(3)(J)**

All eligible postsecondary institutions providing programming under this chapter shall include the unique student identifier assigned to students while in the kindergarten through grade twelve system as a part of the institution's student data management system. Eligible postsecondary institutions providing programming under this chapter shall cooperate with the department on data requests related to the programming. All eligible postsecondary institutions providing programming under this chapter shall collect data and report to the department on the proportion of females and minorities enrolled in science, technology, engineering, and mathematics-oriented educational opportunities provided in accordance with this chapter. The department shall submit the programming data and the department's findings and recommendations in a report to the general assembly annually by January 15.

## ADVANCED PLACEMENT ENROLLMENT IN STEM COURSES

**Table 1: Advanced Placement Course Enrollments by Race/Ethnicity**

Race/Ethnicity	2021-22				2022-23				2023-24			
	Number of Courses	Percent*	Number of STEM Courses	Percent STEM*	Number of Courses	Percent	Number of STEM Courses	Percent STEM*	Number of Courses	Percent	Number of STEM Courses	Percent STEM*
Asian	1,048	6.8%	480	9.1%	1,075	6.9%	489	9.0%	1,179	7.1%	473	8.2%
Black	715	4.6%	166	3.2%	837	5.4%	199	3.7%	936	5.6%	227	4.0%
Hispanic	1,269	8.2%	314	6.0%	1,362	8.8%	369	6.8%	1,588	9.5%	429	7.5%
Two or More Races	668	4.3%	186	3.5%	672	4.3%	213	3.9%	790	4.7%	245	4.3%
American Indian	23	0.1%	7	0.1%	26	0.2%	15	0.3%	31	0.2%	12	0.2%
Pacific Islanders	13	0.1%	2	0.0%	17	0.1%	3	0.1%	21	0.1%	4	0.1%
White	11,646	75.7%	4,091	78.0%	11,497	74.2%	4,152	76.3%	12,104	72.7%	4,344	75.8%
Total	15,382	99.8%	5,246	99.9%	15,486	99.9%	5,440	100%	16,649	100.0%	5,734	100.0%

Source: Iowa Department of Education, Student Reporting in Iowa Collection

\*May not equal 100% due to rounding

**Table 2: Advanced Placement Course Enrollments by Gender**

Gender	2021-22				2022-23				2023-24			
	Number of Courses	Percent*	Number of STEM Courses	Percent STEM*	Number of Courses	Percent	Number of STEM Courses	Percent STEM*	Number of Courses	Percent	Number of STEM Courses	Percent STEM*
Female	8,506	55.3%	2,538	48.4%	8,479	54.8%	2,586	47.5%	8,910	53.5%	2,625	45.8%
Male	6,859	44.6%	2,705	51.6%	6,992	45.2%	2,853	52.4%	7,685	46.2%	3,097	54.0%
Non-Binary	17	0.1%	3	0.1%	15	0.1%	1	0.0%	54	0.3%	12	0.2%
Total	15,382	100.0%	5,246	100.0%	15,486	100.0%	5,440	100.0%	16,649	100.0%	5,734	100.0%

Source: Iowa Department of Education, Student Reporting in Iowa Collection

\*May not equal 100% due to rounding

## CONCURRENT ENROLLMENT IN STEM COURSES

**Table 3: Concurrent Course Enrollments by Race/Ethnicity**

Race/Ethnicity	2021-22				2022-23				2023-24			
	Number of Courses	Percent*	Number of STEM Courses	Percent STEM*	Number of Courses	Percent	Number of STEM Courses	Percent STEM*	Number of Courses	Percent	Number of STEM Courses	Percent STEM*
Asian	1,169	2.7%	431	3.7%	1,177	2.7%	423	3.8%	1,193	2.6%	431	3.8%
Black	1,159	2.7%	379	3.2%	1,166	2.6%	335	3.0%	1,249	2.7%	373	3.3%
Hispanic	3,443	8.0%	1,051	9.0%	3,686	8.3%	972	8.8%	4,153	8.9%	1,019	9.1%
Two or More Races	1,291	3.0%	378	3.2%	1,372	3.1%	354	3.2%	1,462	3.1%	406	3.6%
American Indian	93	0.2%	30	0.3%	76	0.2%	24	0.2%	85	0.2%	21	0.2%
Pacific Islanders	66	0.2%	25	0.2%	70	0.2%	23	0.2%	69	0.1%	18	0.2%
White	35,961	83.3%	9,418	80.4%	36,803	83.0%	8,948	80.8%	38,254	82.3%	8,969	79.8%
Total	43,182	100.1%	11,712	100.0%	44,350	100.1%	11,079	100.0%	46,465	100.0%	11,237	100.0%

Source: Iowa Department of Education, Student Reporting in Iowa Collection

\*May not equal 100% due to rounding

**Table 4: Concurrent Course Enrollments by Gender**

Gender	2021-22				2022-23				2023-24			
	Number of Courses	Percent*	Number of STEM Courses	Percent STEM*	Number of Courses	Percent*	Number of STEM Courses	Percent STEM*	Number of Courses	Percent	Number of STEM Courses	Percent STEM*
Female	21,646	52.6%	5,563	48.6%	22,804	52.8%	5,608	47.9%	24,675	53.1%	5,794	51.6%
Male	19,507	47.4%	5,883	51.4%	20,368	47.2%	6,101	52.1%	21,750	46.8%	5,435	48.4%
Non-Binary	--	--	--	--	10	0.0%	3	0.0%	40	0.1%	8	0.1%
Total	41,153	100.0%	11,446	100.0%	43,182	100.0%	11,712	100.0%	46,465	100.0%	11,237	100.0%

Source: Iowa Department of Education, Student Reporting in Iowa Collection

\*May not equal 100% due to rounding

## POSTSECONDARY ENROLLMENT OPTIONS IN STEM COURSES

**Table 5: Postsecondary Enrollments Options by Race/Ethnicity**

Race/Ethnicity	2021-22				2022-23				2023-24			
	Number of Courses	Percent*	Number of STEM Courses	Percent STEM*	Number of Courses	Percent*	Number of STEM Courses	Percent STEM*	Number of Courses	Percent	Number of STEM Courses	Percent STEM*
Asian	68	13.5%	40	24.2%	53	13.0%	36	23.4%	63	12.9%	53	31.0%
Black	9	1.8%	3	1.8%	6	1.5%	2	1.3%	5	1.0%	2	1.2%
Hispanic	27	5.4%	5	3.0%	34	8.4%	10	6.5%	47	9.6%	5	2.9%
Two or More Races	17	3.4%	4	2.4%	18	4.4%	7	4.5%	21	4.3%	10	5.8%
American Indian	2	0.4%	-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Pacific Islanders	-	0.0%	-	0.0%	1	0.2%	1	0.6%	-	0.0%	-	0.0%
White	380	75.5%	113	68.5%	295	72.5%	98	63.6%	352	72.1%	101	59.1%
Total	503	100.0%	165	99.9%	407	100.0%	154	99.9%	488	100.0%	171	100.0%

Source: Iowa Department of Education, Student Reporting in Iowa Collection

\*May not equal 100% due to rounding

**Table 6: Postsecondary Enrollments Options by Gender**

Gender	2021-22				2022-23				2022-23			
	Number of Courses	Percent*	Number of STEM Courses	Percent STEM*	Number of Courses	Percent	Number of STEM Courses	Percent STEM*	Number of Courses	Percent	Number of STEM Courses	Percent STEM*
Female	251	49.9%	57	34.5%	227	55.8%	58	37.7%	260	53.3%	60	35.1%
Male	248	49.3%	108	65.5%	178	43.7%	95	61.7%	226	46.3%	111	64.9%
Non-Binary	4	0.8%	-	0.0%	2	0.5%	1	0.6%	2	0.4%	-	0.0%
Total	503	100.0%	165	100.0%	407	100.0%	154	100.0%	488	100.0%	171	100.0%

Source: Iowa Department of Education, Student Reporting in Iowa Collection

\*May not equal 100% due to rounding

# IOWA STUDENT DEMOGRAPHIC INFORMATION

**Table 7: 2023-24 K-12 Enrollment by Race/Ethnicity**

Race/Ethnicity	Student Count	Percent
Black or African American	33,501	7.0%
American Indian or Alaska Native	1,512	0.3%
Asian	11,921	2.5%
Native Hawaiian or Other Pacific Islander	3,232	0.7%
Hispanic/Latino	62,415	13.0%
Two or More Races	24,003	5.0%
White	342,108	71.5%
Total	478,692	100%

Source: Iowa Department of Education, Student Reporting in Iowa Collection

\*May not equal 100% due to rounding

**Table 8: 2023-24 K-12 Enrollment by Gender**

<b>Gender</b>	<b>Student Count</b>	<b>Percent</b>
Female	231,876	48.4%
Male	246,433	51.5%
Non-Binary	383	0.1%
Total	478,692	100%

Source: Iowa Department of Education, Student Reporting in Iowa Collection

\*May not equal 100% due to rounding

## FINDINGS

This report provides information about student enrollment patterns by “females and minorities” enrolled in science, technology, engineering, and mathematics-oriented educational opportunities across the multiple pathways under the Senior Year Plus (SYP) program, including Advanced Placement (AP), concurrent enrollment and Postsecondary Enrollment Options (PSEO). Additionally, the report highlights the enrollment data for STEM SYP courses

The most commonly used pathway in the SYP program is concurrent enrollment courses. Concurrent enrollment is supported by a supplementary weighting for eligible courses, as well as the partnership that exists between Iowa school districts and community colleges. The supplementary weighting incentive was created to support college-level course opportunities for Iowa students and pay for the additional cost associated with these courses. The additional weighted funding is not available for either AP or PSEO courses.

Overall, in the 2023-24 school year, students took 46,465 concurrent enrollment courses compared to 16,649 AP and 488 PSEO courses. This same general pattern holds when specifically examining STEM courses within each of these SYP pathways with concurrent enrollment as the primary pathway. Students took 11,237 STEM concurrent enrollment, 5,734 STEM AP, and 171 STEM PSEO courses in the 2023-24 school year.

A notable finding was revealed when examining the gender breakdown of current enrollment STEM courses. Historically, STEM enrollment has been higher for male students compared to female students. However, in the 2023-24 school year, the number and percentage of female students enrolling in STEM concurrent enrollment courses were higher than male students for the first time since data collection for this report began nearly a decade ago.

Overall, students of color are underrepresented in the percentage of students who participate in SYP and SYP STEM courses. In the 2023-24 school year, the statewide enrollment of students in Iowa schools included 28.5 percent of students of color. However, in the 2023-24 school year, only 17.7 percent of students who took concurrent enrollment courses were students of color. Additionally, in the 2023-24 school year, 20.2 percent of STEM concurrent enrollment course enrollments were students of color. This general pattern can be found across all three years (2021-22 to 2023-24) included in this report.

The Governor’s STEM Advisory Council continues to work to ensure all students across Iowa, including students with disabilities and students who are English learners, have meaningful access to high-quality STEM exploration and learning opportunities in and out of school. These opportunities include instructional materials and activities supported by the STEM SCALE-UP Program and work-based learning experiences supported by the STEM BEST Program.