

RESEARCH BRIEF

**STEM Program Headcount and Graduates at NOVA:
2018 through 2021**

This research brief presents Science, Technology, Engineering, and Mathematics (STEM) program headcount enrollment data by semester for Northern Virginia Community College (NOVA) for 2019 through 2021, as well as the College's STEM program graduate data for the 2018-19 through 2020-21 academic years. Section 1 presents STEM credit program headcount data by semester at NOVA for 2019 through 2021. The data provided are for NOVA's transfer degree (Associate of Science—A.S.), non-transfer degree (Associate of Applied Science—A.A.S.) Certificate, and Career Studies Certificate (C.S.C.) STEM programs. Section 2 provides STEM-related headcount data for FastForward (non-credit) programs at the College during this period. Section 3 presents the number of graduates of NOVA's transfer degree (Associate of Science—A.S.), non-transfer degree (Associate of Applied Science—A.A.S.) Certificate, and Career Studies Certificate (C.S.C.) STEM programs during the 2018-19 through 2020-21 academic years.

Key Findings

Headcount

- The total headcount of students in STEM credit programs at NOVA
 - decreased by 9 percent during the Fall 2019 through Fall 2021 semesters
 - decreased by 10 percent during the Spring 2019 through Spring 2021 semesters
 - decreased by 3 percent during the Summer 2019 through Summer 2021 semesters
- The total headcount of students in STEM-related FastForward (non-credit) programs at NOVA
 - increased by 5 percent during the Fall 2019 through Fall 2021 semesters
 - increased by 87 percent during the Spring 2019 through Spring 2021 semesters
 - increased by 26 percent during the Summer 2019 through Summer 2021 semesters

Graduates

- The total number of STEM program graduates at NOVA increased by 17 percent during the 2018-19 through 2020-21 academic years.

Section 1. STEM Credit Program Headcount by Semester: 2019 through 2021

Table 1 presents the headcount of students in STEM credit programs at NOVA during the Fall 2019 through Fall 2021 semesters. The data are presented by academic plan. The total headcount of students in these programs decreased by 9 percent during the period.

Table 1. Headcount of STEM Students by Semester: Fall 2019 through Fall 2021

Academic Plan	Major	Fall 2019	Fall 2020	Fall 2021
1490	Biotechnology, A.A.S.	31	30	16
221-352-03	Web Design and Development, C.S.C.	38	52	67
221-405-43	Forensic Investigation - General, C.S.C.	7	10	5
221-719-71	Geographic Information Systems, C.S.C.	28	32	21
221-729-01	Computer Aided Drafting and Design, C.S.C.	10	18	19
221-732-09	Cybersecurity, C.S.C.	128	135	162
221-915-01	Site Development, C.S.C.	1	3	3
2460	Computer Science, A.S.	1,953	1,910	1,815
2990	Information Systems Technology, A.A.S.	374	431	422
3353	Horticulture Technology: Landscape Design Specialization, A.A.S.	33	35	32
3400	Information Technology, A.S.	1,922	1,777	1,774
3450	Cybersecurity, A.A.S.	1,644	1,817	1,878
8311	Engineering: Electrical Engineering Specialization, A.S.	80	33	16
8800	Science, A.S.	2,664	2,449	1,867
9010	Architecture Technology, A.A.S.	106	123	129
9300	Architectural Drafting, Certificate	10	8	3
9683	Engineering Technology: Mechanical Engineering Tech. Specialization, A.A.S.	19	5	3
Total		9,048	8,868	8,232

Source: IRIS

Table 2, below, presents the headcount of students in STEM credit programs at NOVA during the Spring 2019 through Spring 2021 semesters. The data are presented by academic plan. The total headcount of students in these programs decreased by 10 percent during the period.

Table 2. Headcount of STEM Students by Semester: Spring 2019 through Spring 2021

Academic Plan	Major	Spring 2019	Spring 2020	Spring 2021
1490	Biotechnology, A.A.S.	30	24	30
221-352-03	Web Design and Development, C.S.C.	37	31	81
221-405-43	Forensic Investigation - General, C.S.C.	6	5	8
221-719-71	Geographic Information Systems, C.S.C.	35	28	25
221-729-01	Computer Aided Drafting and Design, C.S.C.	20	15	22
221-732-09	Cybersecurity, C.S.C.	133	111	164
221-915-01	Site Development, C.S.C.	2	2	4
2460	Computer Science, A.S.	1,829	1,769	1,622
2990	Information Systems Technology, A.A.S.	398	398	467
3353	Horticulture Technology: Landscape Design Specialization, A.A.S.	30	32	29
3400	Information Technology, A.S.	1,939	1,682	1,650
3450	Cybersecurity, A.A.S.	1,457	1,628	1,718
8311	Engineering: Electrical Engineering Specialization, A.S.	159	53	20
8800	Science, A.S.	2,650	2,291	2,029
9010	Architecture Technology, A.A.S.	109	107	120
9300	Architectural Drafting, Certificate	11	13	7
9683	Engineering Technology: Mechanical Engineering Tech. Specialization, A.A.S.	27	16	3
Total		8,872	8,205	7,999

Source: IRIS

Table 3 presents the headcount of students in STEM credit programs at NOVA during the Summer 2019 through Summer 2021 semesters. The data are presented by academic plan. The total headcount of students in these programs decreased by 3 percent during the period.

Table 3. Headcount of STEM Students by Semester: Summer 2019 through Summer 2021

Academic Plan	Major	Summer 2019	Summer 2020	Summer 2021
1490	Biotechnology, A.A.S.	21	11	19
221-352-03	Web Design and Development, C.S.C.	17	22	31
221-405-43	Forensic Investigation - General, C.S.C.	3	3	4
221-719-71	Geographic Information Systems, C.S.C.	15	9	15
221-729-01	Computer Aided Drafting and Design, C.S.C.	3	6	5
221-732-09	Cybersecurity, C.S.C.	57	71	71
221-915-01	Site Development, C.S.C.	0	1	0
2460	Computer Science, A.S.	877	952	857
2990	Information Systems Technology, A.A.S.	178	194	205
3353	Horticulture Technology: Landscape Design Specialization, A.A.S.	11	17	15

Academic Plan	Major	Summer 2019	Summer 2020	Summer 2021
3400	Information Technology, A.S.	855	896	877
3450	Cybersecurity, A.A.S.	723	934	883
8311	Engineering: Electrical Engineering Specialization, A.S.	68	31	10
8800	Science, A.S.	1,261	1,320	992
9010	Architecture Technology, A.A.S.	49	44	43
9300	Architectural Drafting, Certificate	7	5	1
9683	Engineering Technology: Mechanical Engineering Tech. Specialization, A.A.S.	17	2	2
Total		4,162	4,518	4,030

Source: IRIS

Section 2. FastForward (Non-Credit) STEM-related Program Headcount by Semester: 2019 through 2021

Table 4 presents the headcount of students in STEM-related FastForward (non-credit) programs at NOVA during the Fall 2019 through Fall 2021 semesters. The data are presented by program. The total headcount of students in these programs increased by 5 percent during the period.

Table 4. Headcount of Students in STEM-related FastForward Programs (Non-Credit) by Semester: Fall 2019 through Fall 2021

Program	Fall 2019	Fall 2020	Fall 2021
AWS Certified Cloud Practitioner	33	11	17
AWS Certified Solutions Architect (Associate)	14	11	18
Certified Billing and Coding Specialist (CBCS)	9	37	20
Certified Ethical Hacker (CEH)	16	11	5
Clinical Medical Assistant (CCMA)	57	71	68
CompTIA A+ Certification	20	35	61
CompTIA Linux+ Certification	47	11	--
CompTIA Network+ Certification	48	--	15
CompTIA Security+ Certification	--	--	31
EPA Section 608 Technician Certification	--	--	10
Nurse Aide Preparation (CNA)	--	--	13
Pharmacy Technician	12	13	12
Total	256	200	270

Source: NOVA Workforce

Table 5, below, presents the headcount of students in STEM-related FastForward (non-credit) programs at NOVA during the Spring 2019 through Spring 2021 semesters. The data are presented by program. The total headcount of students in these programs increased by 87 percent during the period.

Table 5. Headcount of Students in STEM-related FastForward Programs (Non-Credit) by Semester: Spring 2019 through Spring 2021

Program	Spring 2019	Spring 2020	Spring 2021
AWS Certified Cloud Practitioner	--	21	23
AWS Certified Solutions Architect (Associate)	--	46	25
Certified Billing and Coding Specialist (CBCS)	14	15	111
Certified Ethical Hacker (CEH)	24	19	19
Clinical Medical Assistant (CCMA)	65	48	70
CompTIA A+ Certification	78	10	149
CompTIA Linux+ Certification	--	62	36
CompTIA Network+ Certification	57	3	67
CompTIA Security+ Certification	75	9	63
EPA Section 608 Technician Certification	--	--	12
Nurse Aide Preparation (CNA)	9	--	13
Pharmacy Technician	13	12	38
Total	335	245	626

Source: NOVA Workforce

Table 6 presents the headcount of students in STEM-related FastForward (non-credit) programs at NOVA during the Summer 2019 through Summer 2021 semesters. The data are presented by program. The total headcount of students in these programs increased by 26 percent during the period.

Table 6. Headcount of Students in STEM-related FastForward Programs (Non-Credit) by Semester: Summer 2019 through Summer 2021

Program	Summer 2019	Summer 2020	Summer 2021
AWS Certified Cloud Practitioner	--	8	39
AWS Certified Solutions Architect (Associate)	--	--	34
Certified Billing and Coding Specialist (CBCS)	8	--	25
Certified Ethical Hacker (CEH)	10	--	6
Clinical Medical Assistant (CCMA)	78	19	48
CompTIA A+ Certification	55	--	65
CompTIA Linux+ Certification	--	8	19
CompTIA Network+ Certification	46	8	22
CompTIA Security+ Certification	28	--	23
EPA Section 608 Technician Certification	--	--	11
Nurse Aide Preparation (CNA)	--	--	10
Pharmacy Technician	14	--	--
Total	239	43	302

Source: NOVA Workforce

Section 3. STEM Program Graduates: 2018-19 through 2020-21

Table 7 presents the number of STEM program graduates at NOVA for the 2018-19 through 2020-21 academic years. The data are presented by academic plan and are provided for all programs, including transfer degree (Associate of Science—A.S.), non-transfer degree (Associate of Applied Science—A.A.S.), Certificate, and Career Studies Certificate (C.S.C.) programs. The total number of graduates from these programs increased by 17 percent during the period.

Table 7. Number of STEM Program Graduates: 2018-19 through 2020-21

Academic Plan	Major	AY 2018-19	AY 2019-20	AY 2020-21
1490	Biotechnology, A.A.S.	7	6	2
221-352-03	Web Design and Development, C.S.C.	18	15	11
221-405-43	Forensic Investigation - General, C.S.C.	2	1	3
221-719-71	Geographic Information Systems, C.S.C.	15	5	5
221-729-01	Computer Aided Drafting and Design, C.S.C.	34	30	27
221-732-09	Cybersecurity, C.S.C.	45	47	79
221-915-01	Site Development, C.S.C.	0	1	2
2460	Computer Science, A.S.	257	246	296
2990	Information Systems Technology, A.A.S.	51	61	66
3353	Horticulture Technology: Landscape Design Specialization, A.A.S.	1	3	7
3400	Information Technology, A.S.	346	345	383
3450	Cybersecurity, A.A.S.	177	227	308
8311	Engineering: Electrical Engineering Specialization, A.S.	46	23	8
8800	Science, A.S.	306	283	323
9010	Architecture Technology, A.A.S.	8	8	19
9300	Architectural Drafting, Certificate	6	8	4
9683	Engineering Technology: Mechanical Engineering Tech. Specialization, A.A.S.	1	3	2
Total		1,320	1,312	1,545

Source: IRIS