

RESEARCH BRIEF

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Excess Credits Accumulated by NOVA Graduates by Curriculum and Award Type

This Research Brief provides information on the average credits earned by NOVA students at the time of graduation. Average tuition cost accumulated by graduation is also presented. The purpose of this Brief is to highlight the number of credits earned in excess of degree requirements and the cost of these excess credits.

The majority of NOVA's students enroll with the goal of attaining a bachelor's degree. A critical step towards achieving that goal is the transfer of their community college credits to the four-year institution of their choice. There are substantial inefficiencies in the transfer of credits. In particular, students face the interrelated challenges of (1) credit loss during vertical transfer and (2) excess credits earned while at community college.

Credit Loss During Vertical Transfer

Students often find that their four-year institution does not accept all the credits they attained at community college. A study completed by Monaghan and Attewell (2015)ⁱ of the Graduate Center of the City University of New York provides an indication of the prevalence and impact of credit loss during vertical transfer:

- Monaghan and Attewell (2015) found that 58 percent of students were able to transfer 90 percent of their credits. The remaining 42 percent lost over 10 percent of their credits, with 14 percent losing as much as 90 percent of their credits.
- The researchers also found that students who have all or most of their credits accepted by the transfer institution were 2.5 times more likely to attain a Bachelor's degree than students who had less than half their credits transferred.

Excess Credits Earned

A substantial number of community college students have been found to earn more credits than is required to attain their Associate's degree. For example, within the Alamo Colleges District in Texas, it was estimated that 92 percent of students transferred with 70 or more credits although 45 credits was the minimum requirement.ⁱⁱ These excess lower-division course credits may not contribute towards a four-year degree. This increases the chance of a four-year institution not accepting these credits. A Community College Research Center (CCRC) study published in 2012 explores the issue of excess credits earned by community college associate degree graduates.ⁱⁱⁱ The CCRC study was conducted using data from an unnamed community college system and finds the following:

- Around 12 percent of all college-level credits earned by students were excess credits. However, there was marked variation across different programs.
- The top five programs in terms of enrollment had between 50 and 80 percent of graduates with excess credits.
- For graduates who had excess credits and were in one of the top five programs in terms of enrollment, the mean number of excess credits was between 10 and 14.
- Graduates from A.A.S. programs tended to have a higher number of excess credits than graduates from A.S. programs.

Excess Credits Earned by NOVA Students

In exploring the topic of excess credits earned by NOVA students, Table 1 (following page) provides a comparison of the average credits earned to the total credits required for graduation. Some students may have transferred horizontally from another community college to NOVA, and the credits they earned at other institutions are included in the average credits presented in this report. Additionally, average credits includes credits taken outside of the student's major field of study. It is important to note that some students work towards two credentials simultaneously (e.g., a computer science degree and a certificate in cybersecurity). Co-enrollment could require the student to earn credits in addition to those required for his or her major field of study. The following points summarize the contents of Table 1:

- Graduates from A.A.S. programs generally had a higher number of excess credits than graduates from A.A. or A.S. programs.
- The General Studies A.S. program had the highest number of graduates.
 - On average, 15 percent of credits earned by these graduates were excess credits.
- The Business Administration A.S. program had the second highest number of graduates.
 - On average, 8 percent of credits earned by these graduates were excess credits.
- The Nursing A.A.S. program had the highest number of graduates among A.A.S. programs.
 - On average, one third of credits earned by these graduates were excess credits.

Table 2 (page 4) presents an estimate of tuition paid by graduates. This data provides an understanding of the cost associated with earning excess credits. Tuition costs are calculated based on the Fall 2015 in-state student per credit cost (\$171.25). It should be noted that tuition changes annually and these cost figures only provide a rough estimate:

- As A.A.S. graduates tended to accumulate the most excess credits, these graduates generally paid a higher proportion of tuition towards excess credits.
- Across A.A.S. programs, the median percentage of tuition due to excess credits was 20 percent.
- Across A.S. programs, the median percentage of tuition due to excess credits was 17 percent. However, in the high enrollment Business Administration program, graduates paid 8 percent of tuition towards excess credits.

The accumulation of excess credits by community college students can be attributed to various reasons. Arguably, among the most important reasons are inadequate advising and poorly outlined program tracks. These issues are given primacy because they represent a failure on the part of the college to adequately support students in their academic goals. Providing support in choosing an academic program, assisting in the development of academic plans, and providing clear program maps could help to decrease the number of unnecessary courses that students enroll in and accelerate students towards completion.

**Table 1. Average Credits of NOVA Graduates by Curriculum and Award Type:
2015-16 Graduates**

Curriculum	Major	2015-16				
		Number of Graduates	Total Credits Required for Graduation	Average Credits at Graduation	Excess Credits at Graduation	
					#	%
Award = A.A.						
529	FINE ARTS	31	60	79	19	24%
555	MUSIC	11	60	76	16	21%
648	LIBERAL ARTS	406	60	74	14	19%
Award = A.S.						
246	COMPUTER SCIENCE	169	60	78	18	23%
831	ENGINEERING	176	67-68	86	18	21%
880	SCIENCE	371	60-64	80	16	20%
340	INFORMATION TECHNOLOGY	373	62	75	13	17%
699	GENERAL STUDIES	1,565	60	71	11	15%
882	SOCIAL SCIENCES	638	61	72	11	15%
213	BUSINESS ADMINISTRATION	1,015	61-65	71	6	8%
Award = A.A.A.						
559	MUSIC	5	65	105	40	38%
530	FINE ARTS	11	65-67	72	5	7%
Award = A.A.S						
427	FIRE SCIENCE TECHNOLOGY	3	67	128	61	48%
109	DIAGNOSTIC MEDICAL SONOGRAPHY	13	68	103	35	34%
146	EMERGENCY MEDICAL SERVICES	22	67	100	33	33%
901	ARCHITECTURE TECHNOLOGY	10	67-68	99	31	31%
156	NURSING	156	69	100	31	31%
152	HEALTH INFORMATION MANAGEMENT	13	72	101	29	29%
172	RADIOGRAPHY	43	70	99	29	29%
640	AMERICAN SIGN LANGUAGE	5	65-66	92	26	28%
511	COMMUNICATION DESIGN	34	67-68	93	25	27%
181	RESPIRATORY THERAPY	9	71	94	23	24%
345	CYBERSECURITY	24	66	88	22	25%
151	MEDICAL LABORATORY TECHNOLOGY	17	69	91	22	24%
126	OCCUP. THERAPY ASSISTANT	11	70	92	22	24%
968	ENGINEERING TECHNOLOGY	9	67-68	88	20	23%
904	AIR CONDITIONING & REFRIG.	21	67	86	19	22%
248	CONTRACT MANAGEMENT	3	69	87	18	21%
118	DENTAL HYGIENE	34	72	89	17	19%
299	INFORMATION SYSTEMS TECHNOLOGY	54	67	84	17	20%
180	PHYSICAL THERAPIST ASSISTANT	29	69	86	17	20%
212	BUSINESS MANAGEMENT	36	69	85	16	19%
775	HOSPITALITY MANAGEMENT	24	65	81	16	20%
203	ACCOUNTING	38	66	80	14	18%
400	ADMINISTRATION OF JUSTICE	74	66	80	14	18%
636	EARLY CHILDHOOD DEVELOPMENT	60	67-68	82	14	17%
251	MARKETING	12	66	80	14	18%
335	HORTICULTURE TECHNOLOGY	7	67-68	80	12	15%
909	AUTOMOTIVE TECHNOLOGY	43	67-68	79	11	14%
917	CONSTRUCTION MANAGEMENT TECH.	4	68	77	9	12%
260	PARALEGAL STUDIES	41	65	74	9	12%
502	PHOTOGRAPHY AND MEDIA	12	65-66	75	9	12%
249	TRAVEL AND TOURISM	1	65	74	9	12%
188	VETERINARY TECHNOLOGY	52	68	77	9	12%
149	BIOTECHNOLOGY	10	65-67	75	8	11%
520	INTERIOR DESIGN	17	65-66	69	3	4%
Total		5,712	--	76	--	

Notes: Data is sorted by difference from total credits acquired (highest to lowest) within each award type. Headcount is duplicated. Credits that do not count towards graduation (e.g. credits earned in developmental or ESL courses) are not included in average credits. Average credits includes credits taken outside of the student's major field of study. Certificate programs are not included as Certificate program students often co-enrolled in a degree program and accumulated numerous excess credits relative to their certificate program requirements. Source: Total credits required for graduation attained from NOVA Catalog.

Table 2. Average Tuition Costs Accumulated by College Graduates by Curriculum and Award Type: 2015-16 Graduates

Curriculum	Major	2015-16			
		Number of Graduates	Avg. Tuition Accumulated By Graduation	Avg. Tuition Due to Excess Credits	% of Total Tuition Due to Excess Credits
Award = A.A.					
529	FINE ARTS	31	\$13,528.75	\$3,253.75	24%
555	MUSIC	11	\$13,015.00	\$2,740.00	21%
648	LIBERAL ARTS	406	\$12,672.50	\$2,397.50	19%
Award = A.S.					
246	COMPUTER SCIENCE	169	\$13,357.50	\$3,082.50	23%
831	ENGINEERING	176	\$14,727.50	\$3,082.50	21%
880	SCIENCE	371	\$13,700.00	\$2,740.00	20%
340	INFORMATION TECHNOLOGY	373	\$12,843.75	\$2,226.25	17%
699	GENERAL STUDIES	1,565	\$12,158.75	\$1,883.75	15%
882	SOCIAL SCIENCES	638	\$12,330.00	\$1,883.75	15%
213	BUSINESS ADMINISTRATION	1,015	\$12,158.75	\$1,027.50	8%
Award = A.A.A.					
559	MUSIC	5	\$17,981.25	\$6,850.00	38%
530	FINE ARTS	11	\$12,330.00	\$856.25	7%
Award = A.A.S					
427	FIRE SCIENCE TECHNOLOGY	3	\$21,920.00	\$10,446.25	48%
109	DIAGNOSTIC MEDICAL SONOGRAPHY	13	\$17,638.75	\$5,993.75	34%
146	EMERGENCY MEDICAL SERVICES	22	\$17,125.00	\$5,651.25	33%
901	ARCHITECTURE TECHNOLOGY	10	\$16,953.75	\$5,308.75	31%
156	NURSING	156	\$17,125.00	\$5,308.75	31%
152	HEALTH INFORMATION MANAGEMENT	13	\$17,296.25	\$4,966.25	29%
172	RADIOGRAPHY	43	\$16,953.75	\$4,966.25	29%
640	AMERICAN SIGN LANGUAGE	5	\$15,755.00	\$4,452.50	28%
511	COMMUNICATION DESIGN	34	\$15,926.25	\$4,281.25	27%
181	RESPIRATORY THERAPY	9	\$16,097.50	\$3,938.75	24%
345	CYBERSECURITY	24	\$15,070.00	\$3,767.50	25%
151	MEDICAL LABORATORY TECHNOLOGY	17	\$15,583.75	\$3,767.50	24%
126	OCCUP. THERAPY ASSISTANT	11	\$15,755.00	\$3,767.50	24%
968	ENGINEERING TECHNOLOGY	9	\$15,070.00	\$3,425.00	23%
904	AIR CONDITIONING AND REFRIGERATION	21	\$14,727.50	\$3,253.75	22%
248	CONTRACT MANAGEMENT	3	\$14,898.75	\$3,082.50	21%
118	DENTAL HYGIENE	34	\$15,241.25	\$2,911.25	19%
299	INFORMATION SYSTEMS TECHNOLOGY	54	\$14,385.00	\$2,911.25	20%
180	PHYSICAL THERAPIST ASSISTANT	29	\$14,727.50	\$2,911.25	20%
212	BUSINESS MANAGEMENT	36	\$14,556.25	\$2,740.00	19%
775	HOSPITALITY MANAGEMENT	24	\$13,871.25	\$2,740.00	20%
203	ACCOUNTING	38	\$13,700.00	\$2,397.50	18%
400	ADMINISTRATION OF JUSTICE	74	\$13,700.00	\$2,397.50	18%
636	EARLY CHILDHOOD DEVELOPMENT	60	\$14,042.50	\$2,397.50	17%
251	MARKETING	12	\$13,700.00	\$2,397.50	18%
335	HORTICULTURE TECHNOLOGY	7	\$13,700.00	\$2,055.00	15%
909	AUTOMOTIVE TECHNOLOGY	43	\$13,528.75	\$1,883.75	14%
917	CONSTRUCTION MANAGEMENT TECH.	4	\$13,186.25	\$1,541.25	12%
260	PARALEGAL STUDIES	41	\$12,672.50	\$1,541.25	12%
502	PHOTOGRAPHY AND MEDIA	12	\$12,843.75	\$1,541.25	12%
249	TRAVEL AND TOURISM	1	\$12,672.50	\$1,541.25	12%
188	VETERINARY TECHNOLOGY	52	\$13,186.25	\$1,541.25	12%
149	BIOTECHNOLOGY	10	\$12,843.75	\$1,370.00	11%
520	INTERIOR DESIGN	17	\$11,816.25	\$513.75	4%

Note: Tuition costs based on Fall 2015 Virginia resident student per credit cost of \$171.25. Data is sorted by difference from total credits acquired (highest to lowest) within each award type.

ⁱ Monaghan, D. B., & Attewell, P. (2014). The community college route to the bachelor degree. *Educational Evaluation and Policy Analysis*

ⁱⁱ Smith, A. A. (2015, June 8). 2 +2 Shouldn't Equal 5. *Inside Higher ED*. Retrieved from <https://www.insidehighered.com/news/>

ⁱⁱⁱ Zeidenberg, M. (2015). Valuable learning or "spinning their wheels"? Understanding excess credits earned by community college associate degree completers. *Community College Review*, 43(2), 123-141.