

Appendix

Table A1

First-, Second-, and Third-Year Retention Rates by Program Type and Faculty, Universidad de Atacama, 2020–2024

Program Type and Faculty	1st-Year Retention					2nd-Year Retention				3rd-Year Retention		
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2020	2021	2022
Professional with bachelor's degree	85%	83%	77%	85%	78%	75%	69%	67%	74%	65%	61%	60%
Faculty of Health Sciences	86%	84%	78%	88%	79%	78%	66%	70%	78%	69%	59%	65%
Faculty of Legal and Social Sciences	88%	85%	78%	94%	86%	79%	72%	73%	90%	72%	66%	65%
Faculty of Humanities	86%	89%	83%	82%	84%	75%	79%	75%	72%	70%	74%	71%
Faculty of Engineering	84%	79%	72%	83%	70%	71%	62%	56%	68%	58%	50%	45%
Faculty of Medicine	82%	81%	83%	89%	91%	77%	77%	81%	85%	72%	72%	81%
Technology Faculty (bachelor's)	74%	79%	83%	59%	73%	53%	66%	78%	48%	32%	62%	72%
Non-Baccalaureate Professional	94%	88%	71%	73%	69%	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Technology Faculty (main campus)	98%	91%	70%	70%	72%	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vallenar Campus	88%	82%	75%	80%	64%	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Higher Technical (Technician)	68%	69%	65%	68%	70%	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Technology Faculty (main campus)	70%	74%	68%	72%	71%	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vallenar Campus	66%	62%	60%	62%	69%	N/A	N/A	N/A	N/A	N/A	N/A	N/A
UDA Overall Retention	79%	79%	72%	77%	74%	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note. 2nd- and 3rd-year retention data are not available (N/A) for non-baccalaureate professional and technical programs, as these are shorter-cycle programs. N/A in the UDA overall row reflects that multi-year retention is not reported as a single institutional aggregate. Retention is defined as continuous enrollment from one year to the next within the same institution. *Source:* Institutional Research Unit, Universidad de Atacama (2025).

Citation: Santander, E., Fariña, J., & Sotomayor, P. (2026). Unpacking the black box of first-year college attainment: Evidence from a flagship regional university in Chile. *Education Policy Analysis Archives*, 34(48). <https://doi.org/10.14507/epaa.34.8997>

Table A2*First-Year Enrollment by School, Schedule and Cohort*

Faculty	Schedule	Cohort						Total	%
		2015	2016	2017	2018	2019	2020		
Engineering	Day	464	395	362	327	324	252	2124	0.176
	Evening	0	202	241	193	217	107	960	0.08
Technology	Day	230	217	245	294	260	222	1468	0.122
	Evening	0	377	417	369	341	195	1699	0.141
Medicine	Day	0	0	0	37	35	39	111	0.009
Health Sciences	Day	205	224	234	212	231	228	1334	0.111
Humanities And Education	Day	174	207	226	240	257	181	1285	0.107
Legal And Social Sciences	Day	107	117	132	124	147	166	793	0.066
Vallenar Campus	Day	95	64	97	71	117	111	555	0.046
	Evening	240	263	285	349	303	285	1725	0.143
Total		1515	2066	2239	2216	2232	1786	12054	1.000

Table A3*Associations between Student Characteristics, Enrollment Conditions, and First-Year Credit Approval Rate*

	(1)	(2)	(3)	(4)	(5)	(6)
	Fall-term pass rate			Spring-term pass rate (conditional on course taking)		
<i>Student characteristics</i>						
Female	0.047*** (0.010)	0.018** (0.008)	0.016* (0.009)	0.080*** (0.012)	0.025** (0.010)	0.029*** (0.011)
First Gen (college)	0.000 (0.008)	-0.011 (0.007)	-0.004 (0.008)	-0.004 (0.010)	0.001 (0.010)	-0.006 (0.010)
Foreign	-0.038 (0.032)	-0.043 (0.034)	-0.019 (0.032)	-0.024 (0.035)	-0.014 (0.033)	-0.006 (0.034)
<i>High School Type (base = Public)</i>						
Private Voucher	0.033*** (0.007)	0.047*** (0.006)	0.045*** (0.006)	0.028*** (0.009)	0.046*** (0.007)	0.043*** (0.007)
Private	0.003 (0.021)	0.020 (0.021)	0.011 (0.020)	-0.007 (0.030)	0.017 (0.020)	0.012 (0.024)

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	(1)	(2)	(3)	(4)	(5)	(6)
	Fall-term pass rate			Spring-term pass rate (conditional on course taking)		
<i>College enrollment attributes</i>						
Years since high school graduation	0.003** (0.001)		0.003** (0.001)	0.007*** (0.001)		0.007*** (0.001)
Main campus	-0.029 (0.021)			0.001 (0.034)		
Day shift	-0.017 (0.019)			0.026 (0.034)		
College degree	-0.057*** (0.021)			-0.062* (0.032)		
Distance to hometown (>200 km)	-0.013 (0.019)		-0.011 (0.015)	0.002 (0.021)		-0.009 (0.014)
State backed loan	0.039*** (0.013)		0.039*** (0.013)	0.019 (0.015)		0.025* (0.014)
Free college	0.014* (0.007)		0.015** (0.007)	0.004 (0.011)		0.007 (0.009)
Regular admission	0.028** (0.014)		0.035*** (0.008)	0.043** (0.021)		0.027*** (0.009)
<i>Fixed effects</i>						
Cohort	Yes	Yes	Yes	Yes	Yes	Yes
Major	No	Yes	Yes	No	Yes	Yes
Constant	0.853*** (0.021)	0.823*** (0.008)	0.792*** (0.011)	0.761*** (0.024)	0.784*** (0.010)	0.766*** (0.012)
Observations	8,135	9,187	8,133	7,104	7,956	7,102
R-squared	0.050	0.135	0.144	0.059	0.138	0.143

Note. Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$ Table reports coefficients from Linear Probability Models. Models estimate associations with academic progression outcomes (passing all courses in the fall, spring, and full academic year. Cohort and major fixed effects vary by model. Standard errors are clustered at the major level in all models. Observation counts vary by outcome due to students with no courses in a term and missing covariates (e.g., parental education), and because ‘pass all’ outcomes are defined conditional on taking courses.