

Preliminary Analysis of Application Date and High School GPA as Risk Factors in Student Performance

Late applicant categories

Students applying to UNLV are grouped into four categories based on their date of application to UNLV. These groupings emerged from an analysis of three years of application data. The four categories used in this preliminary analysis are:

Early and On-time:	On or before 2/1/2009
Late:	After 2/1/2009 and before 6/1/2009
Very Late:	On or after 6/1/2009

Because application date was not consistently recorded on SIS, IAP staff were advised to use application fee date as a proxy, as it more reliably represented a student's application date during that and previous terms.

Background

Our initial analysis focused on the performance of alternate criteria admits compared to regular admits, and yielded few actionable differences until we added cross-tabulations of high school grade point average (hsgpa). From the second analysis we concluded that hsgpa was a stronger predictor of performance, as measured by first year retention and end of semester gpa, than the basis of admission itself. Regular admits with a hsgpa of less than 3.0 did not perform as well as alternate criteria admits with a hsgpa of 3.0 or greater. This finding is due in part to the fact that the core hsgpa is generally less dependable as a predictor of high school performance than unweighted hsgpa presumably because the core gpa 1) can use a weighted gpa from honors and AP courses, 2) is calculated on only the subset of "core" courses, 3) and the "core" courses may be susceptible to grade inflation (at least in Nevada high schools) because of their use in college admissions.

Chart 1—First Year Retention of New Freshmen by Entering GPA

Looking more closely at the entering freshmen with < 3.0 hsgpa, we found that the largest proportion of this group fell into the category of late applicants. Our earlier research on UNLV entering freshman indicated that late applicants had a higher risk of dropping out, a finding validated many times at the national level.

Chart 2—When Do New Freshmen Apply?

So we focused our subsequent analyses on the proportion of the entering freshmen with <3.0 hsgpa and found that the level of risk was even greater with this combination of attributes, although late applicants in general were less like to be retained.

Chart 3—Fall-to-Fall Retention of New Freshmen by Application Date

We found that application date was also associated with lower end of semester and end of first year UNLV gpa for entering freshmen with <3.0 hsgpa.

Chart 4--Average Cumulative GPA of New Freshmen by Application Date

Finding that more transfers than entering freshmen applied very late—both in total numbers as well as proportionally, we decided to look at this group as well.

Chart 5—When Do New Undergraduates Apply? Percent distribution

Chart 6—When Do New Undergraduates Apply? Number distribution

Following the path we took for entering freshmen, we wanted to determine if transfer gpa would show an association to performance similar to that of hsgpa. However, we found that transfers who were admitted with <2.5 college gpa had retention rates close to that of transfers admitted with a 2.5 or better, varying by only 2% points.

Application date showed a stronger association, with late applicants showing a first year retention rate of 11% points lower than very early and on time applicants.

Chart 7—Fall-to-Fall Retention of New Transfers by Application Date, Fall 2009 Cohort

Summary points:

The following is a bulleted summary of the performance characteristics of Fall 2009 entering freshmen based on their date of application to UNLV. The focus is on very late applicants:

- In fall 2009, approximately 700 entering freshmen and transfers applied very late. The 700 were all enrolled students, and therefore the total number very late applicants including non-enrolled, exceeded this number.

Performance of applicant groups

- Late applicants do not perform as well when measured by first retention and UNLV gpa, however, this is more pronounced for freshmen than for transfers.
- Freshmen admitted with less than a 3.0 hsgpa are at even greater risk, and are over-represented in the late and very late applicant groups.

Characteristics of entering freshmen applicant groups

- As a group, 80% of early and on-time applicants have hsgpa's of 3.0 or higher, compared to 67% of late and 62% of very late applicants.
- As a group, 24% of early and on-time applicants are first generation, compared to 32% of late applicants and 33% of very late applicants.

- 39% of men and 32% of women apply late and very late; 6% of women and 8% of men apply very late.
- 42% of underrepresented minorities apply late and very late compared to 32% of Whites and Asians; 8 % of underrepresented minorities apply very late compared to 7% of Whites and Asians.

Issues to consider

Although UNLV enrolled 700 entering freshmen and transfers who were very late applicants, many more applied than were enrolled. Therefore, the impact on diminished campus resources is greater than what is represented by those students who enrolled.

Very late applicants are at an extreme disadvantage from the beginning. The quality of their experience at UNLV is impacted by the strain they place on campus resources as faculty and staff are gearing up for a new term. These students are likely to face a number of challenges, including: admissions evaluators under pressure to process applications and transcripts prior to the first day of classes; lack of availability of desired classes; and lack of familiarity with the campus environment and services.

At the very least, this group should be identified for early intervention by advisors and other campus support services.

Finally, this descriptive analysis should be followed by more rigorous statistical analysis of the relationship of application date to student preparedness and success.

Chart 1. First-year Retention of New Freshmen by Entering GPA

Fall 2009 Cohort

--- High School GPA — Core HS GPA

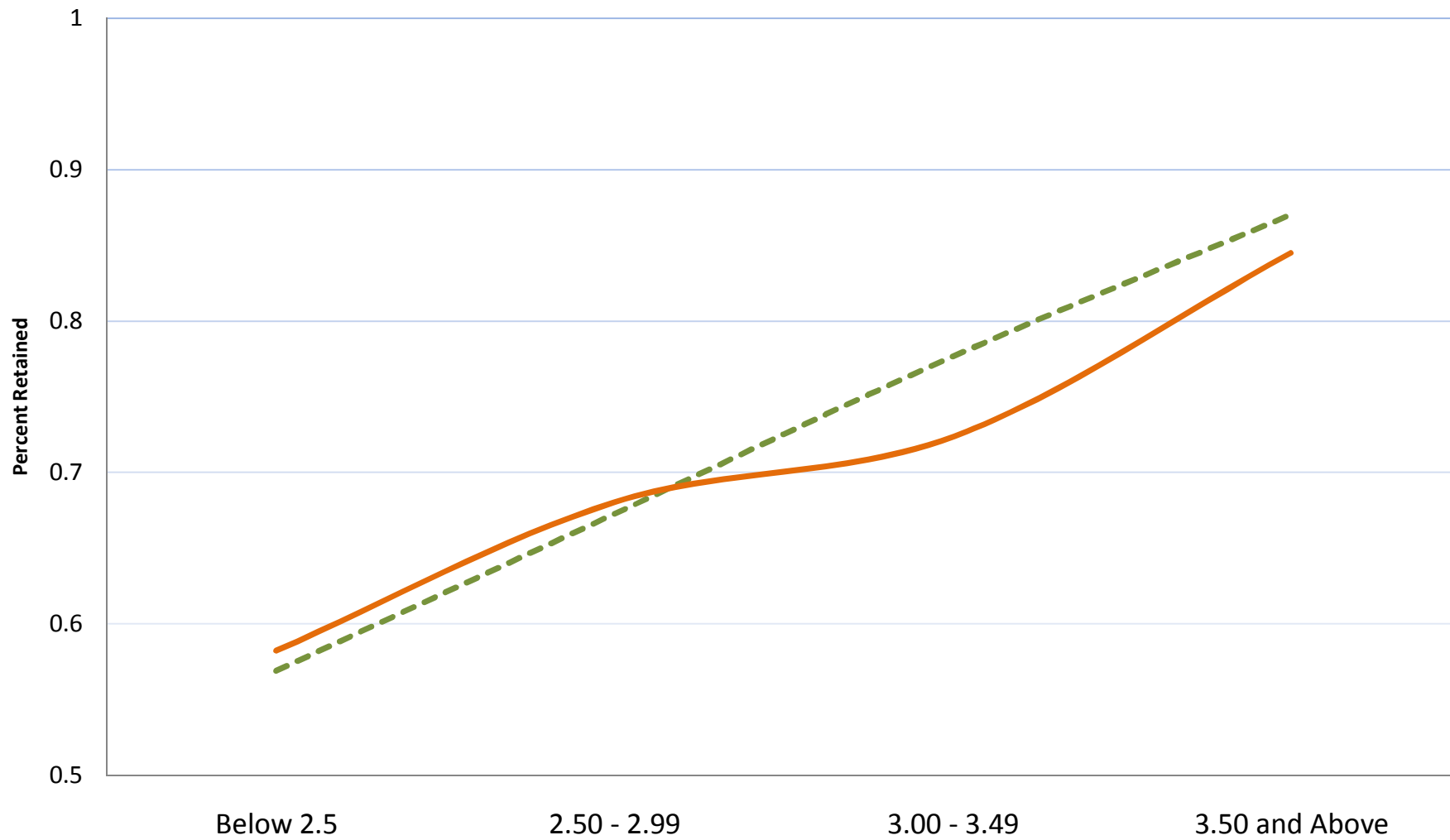


Chart 2. When Do New Freshmen Apply?

Fall 2009 Cohort

—◆— All New Freshmen -■- Below 3.0 Core HS GPA

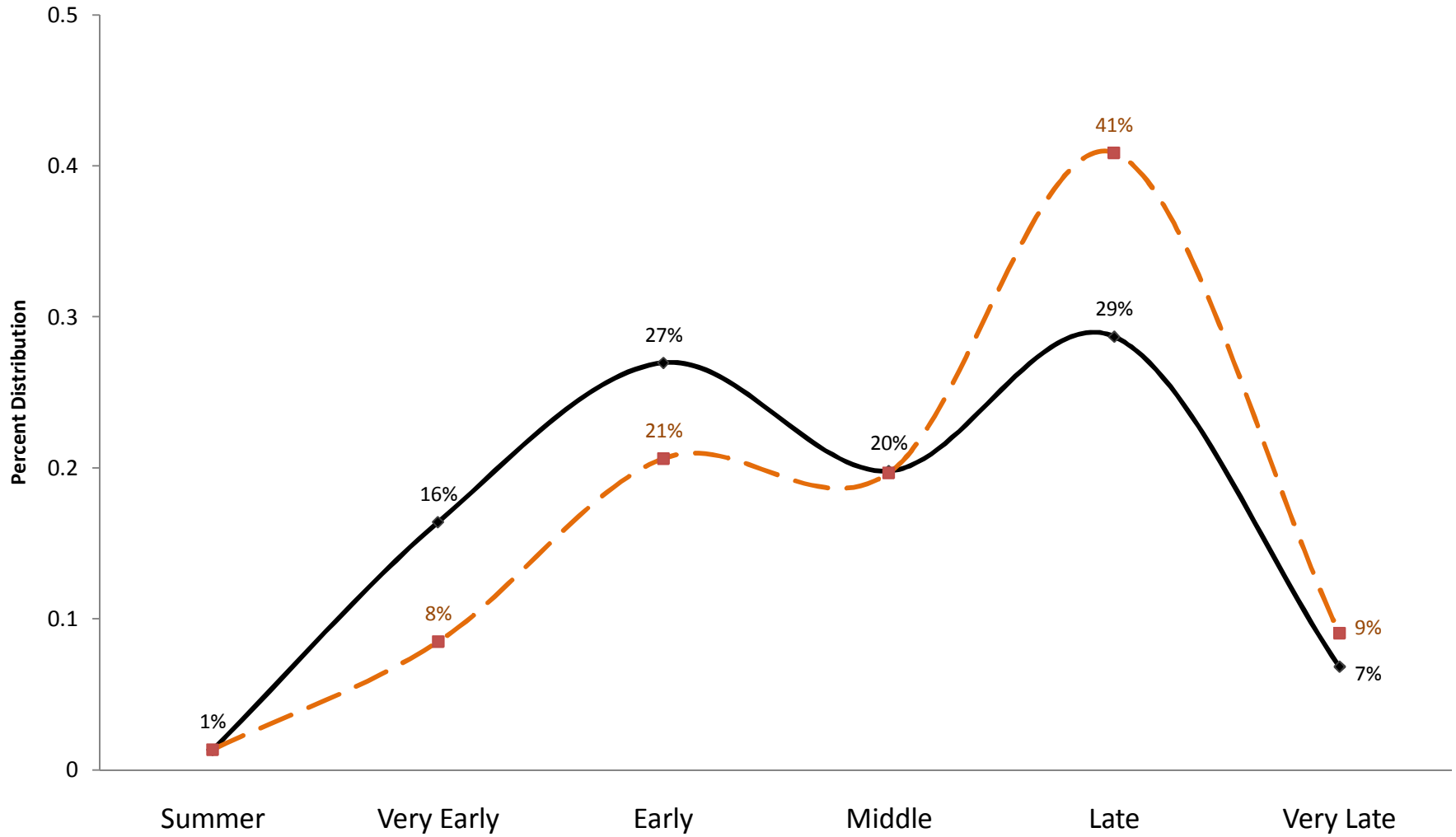


Chart 3. Fall-to-Fall Retention of New Freshmen by Application Date
Fall 2009 Cohort

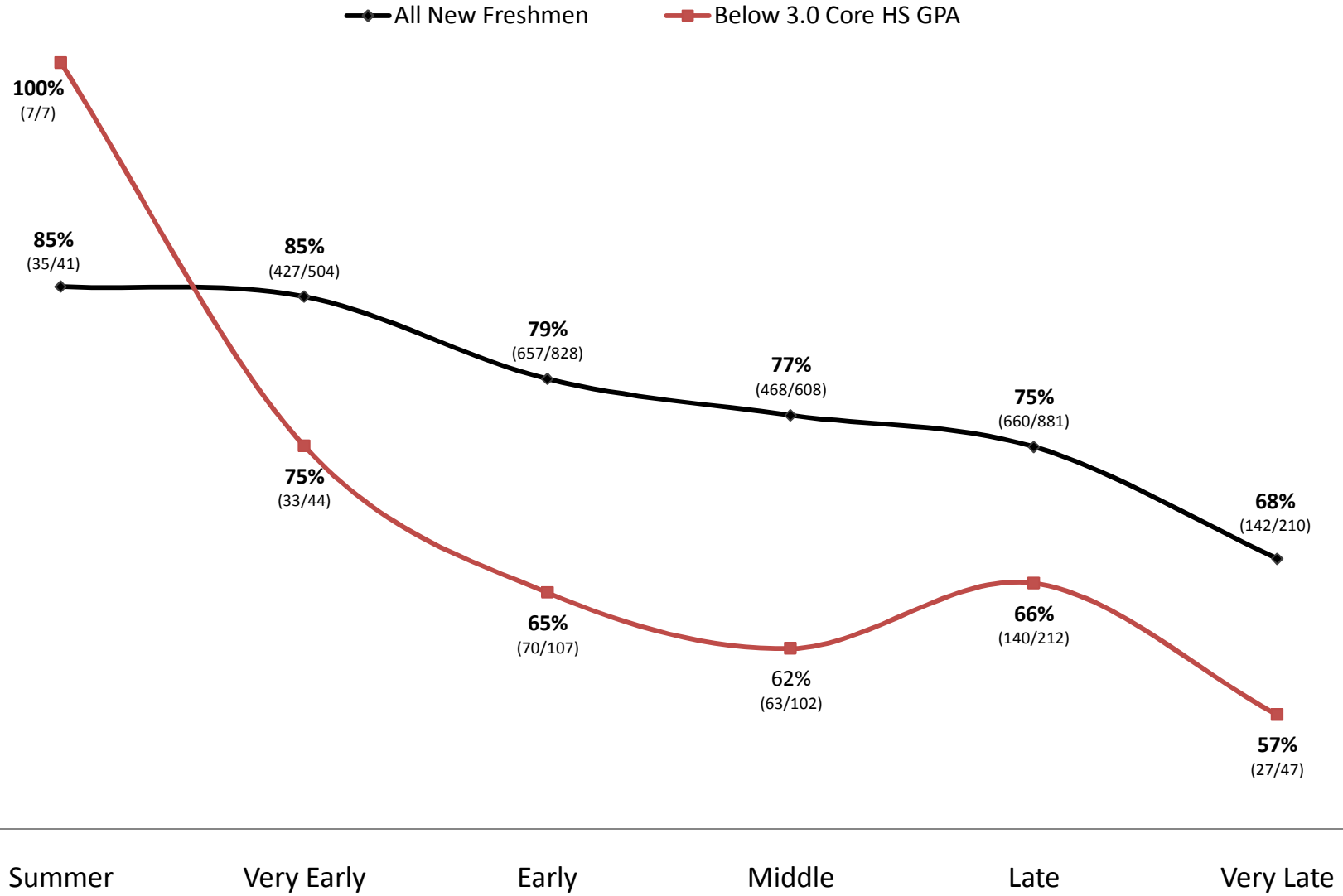


Chart 4. Average Cumulative GPA of New Freshmen by Application Date Fall 2009 Cohort

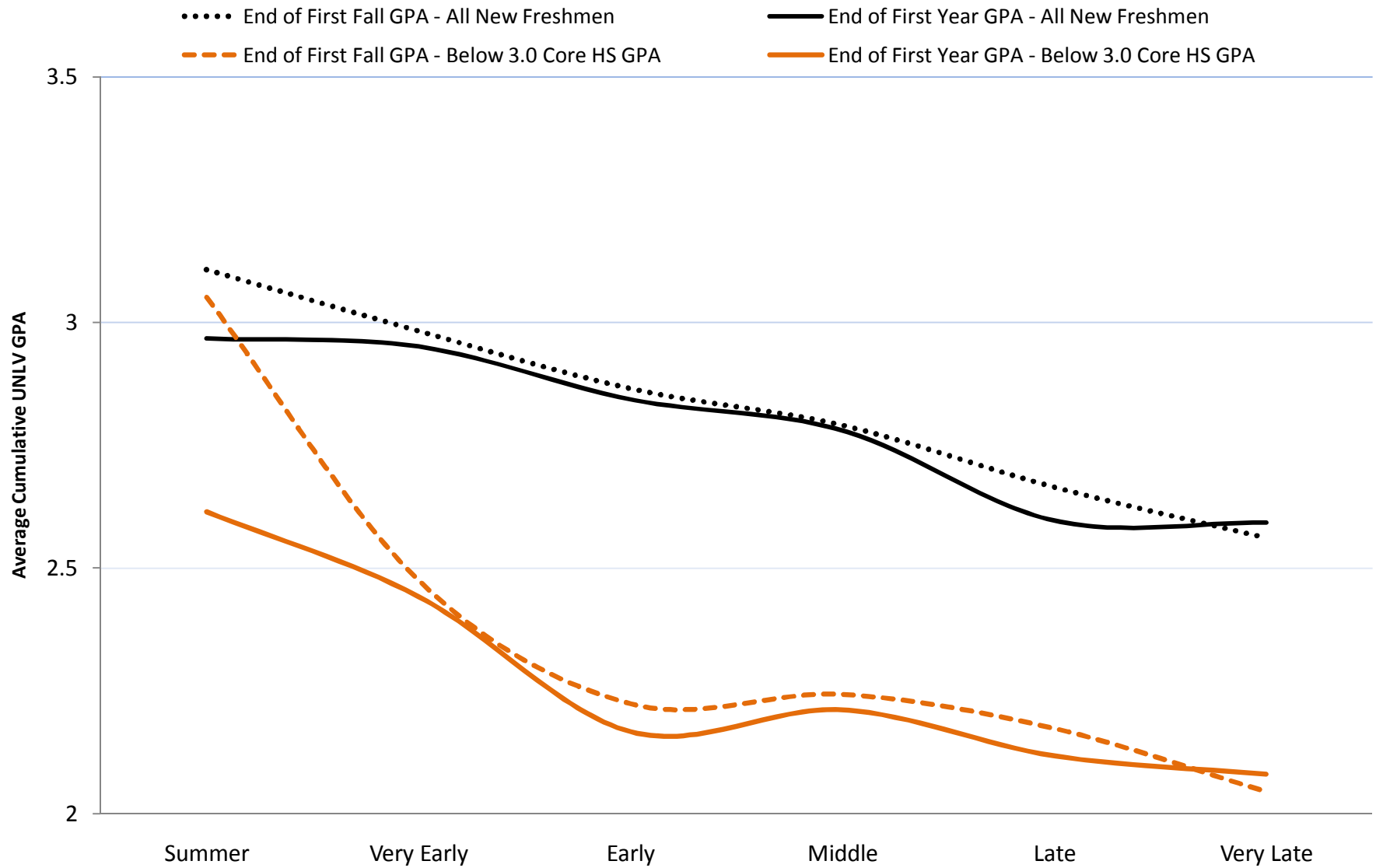


Chart 5. When Do New Undergraduates Apply?

Fall 2009 Cohort

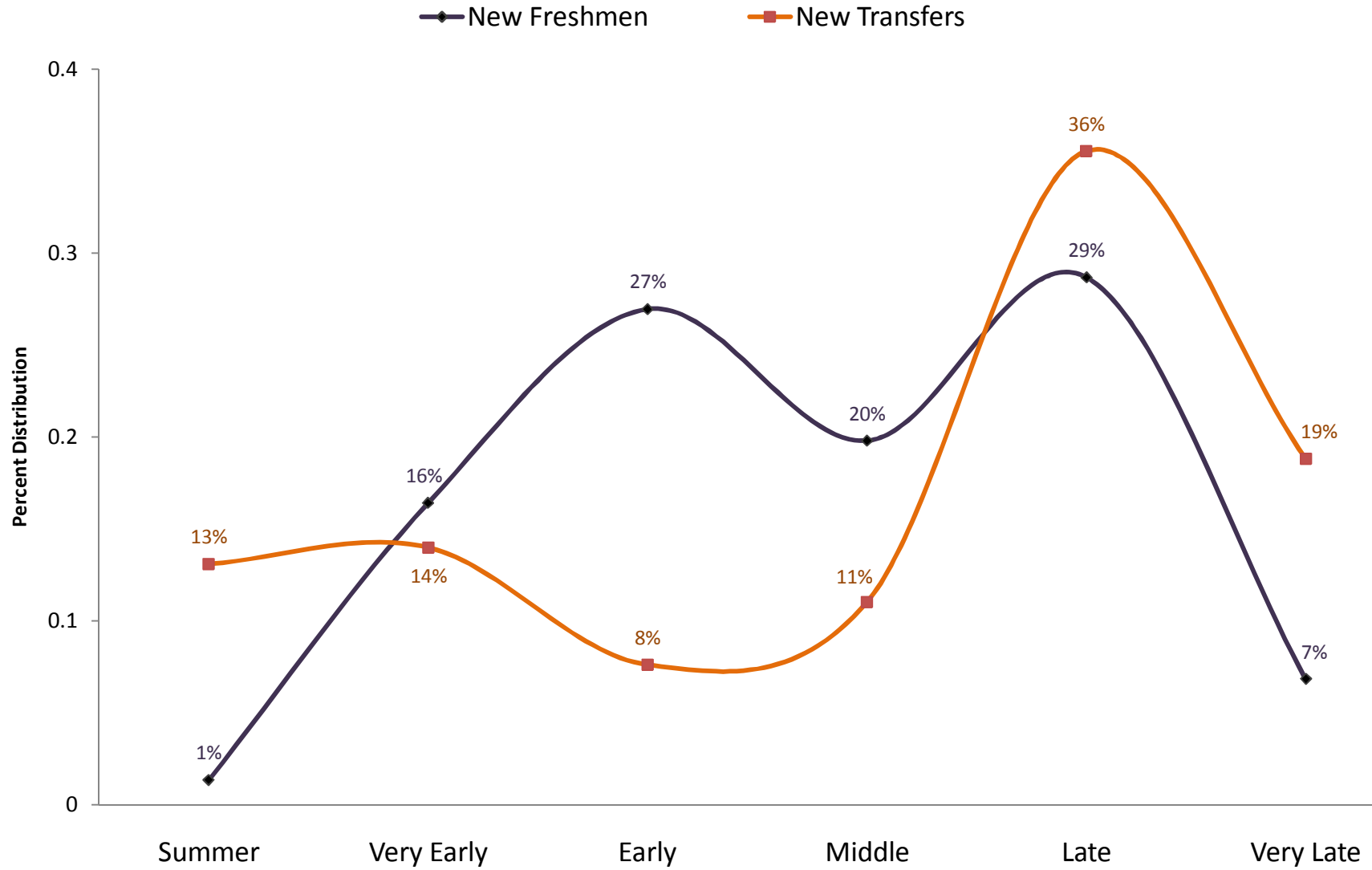


Chart 6. When Do New Undergraduates Apply?

Fall 2009 Cohort

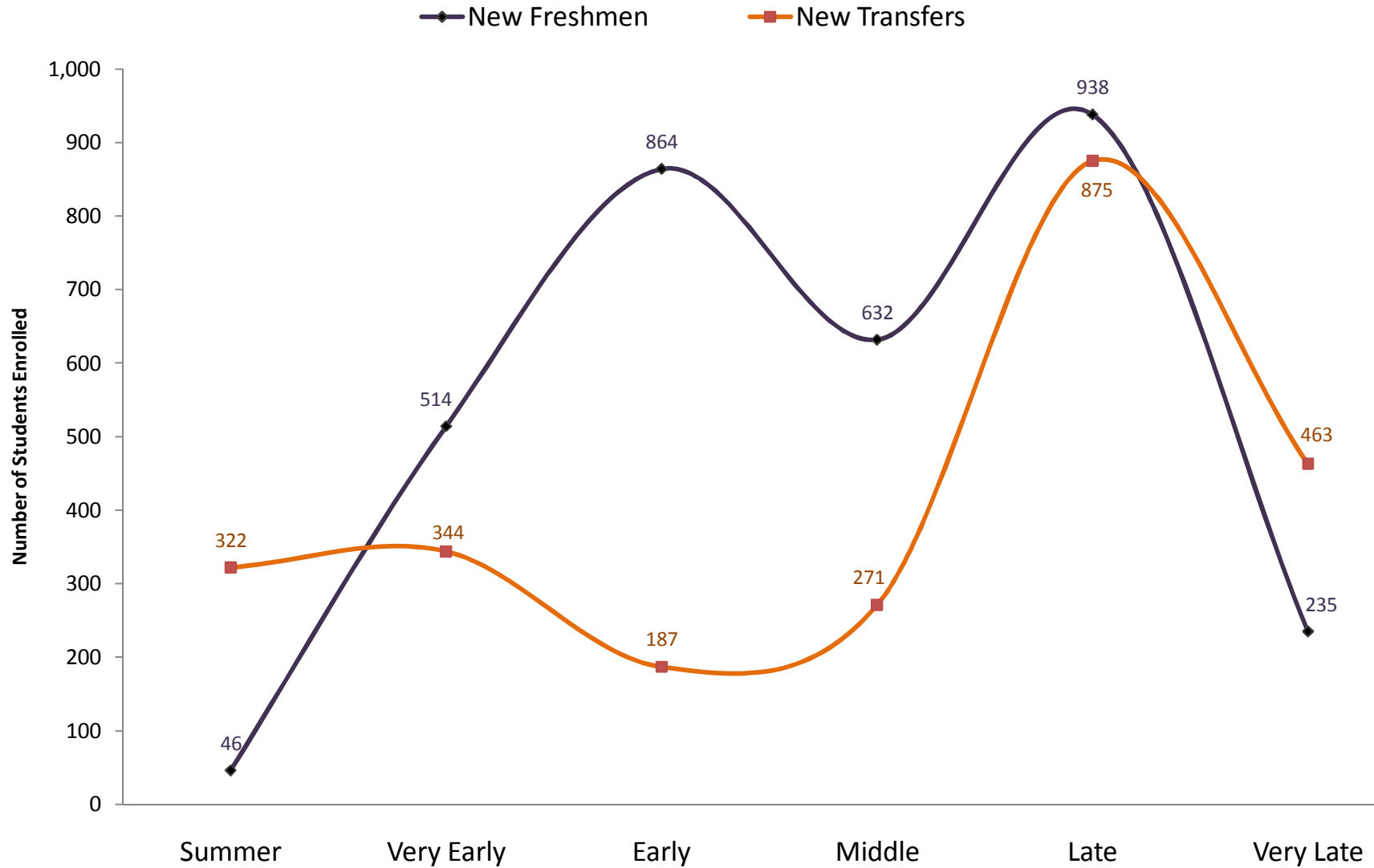
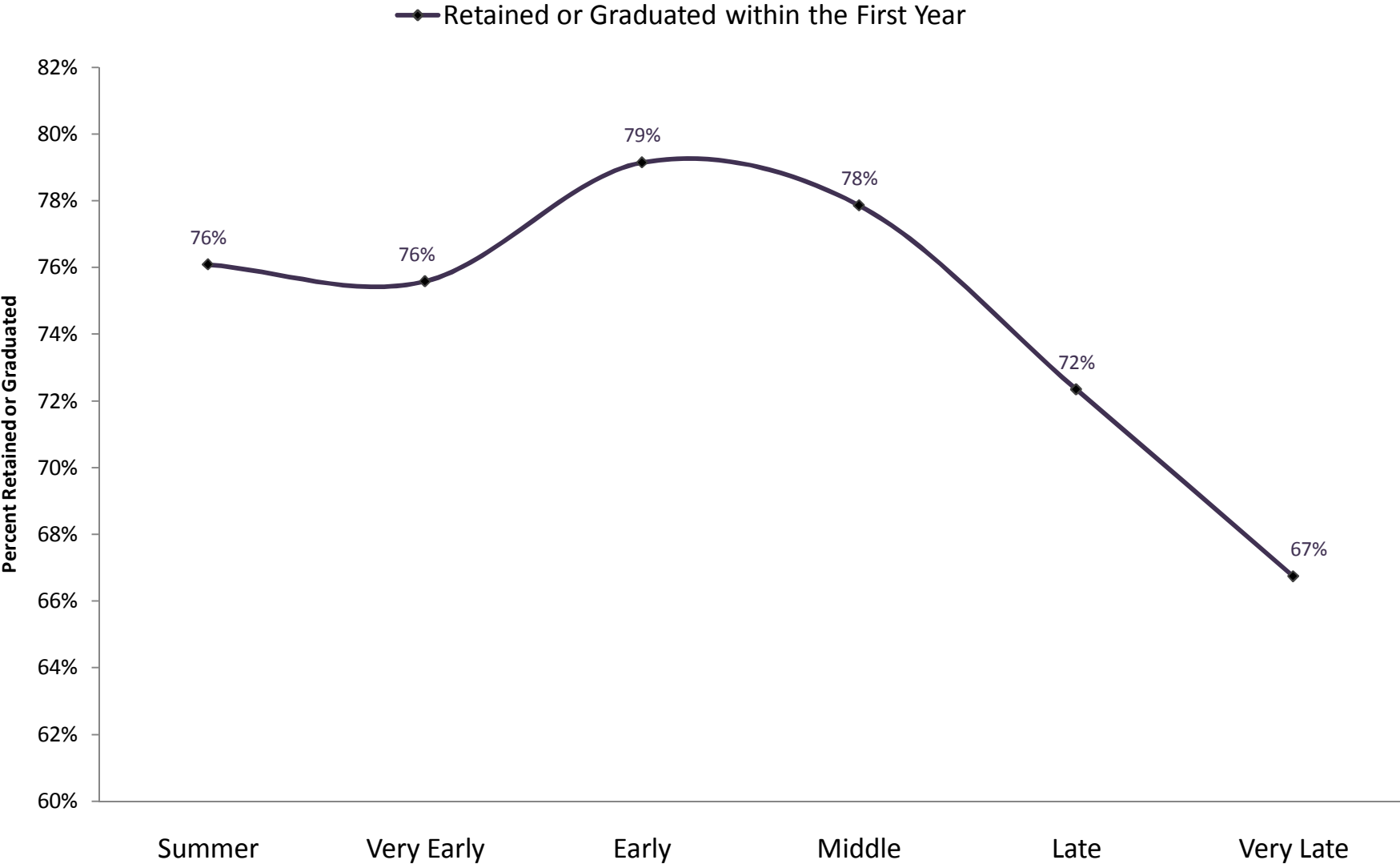


Chart 7. Fall-to-Fall Retention of New Transfers by Application Date
Fall 2009 Cohort



First-year Educational Outcomes of New Freshmen by High School GPA
Fall 2009 Cohort

High School GPA	Cohort		First-year Retention			Cumulative UNLV GPA	
	(#)	(% dist)	(#)	(% retained)	(% dist)	(avg end of first sem)	(avg end of first year)
3.50 and Above	953	31%	829	87%	35%	3.27	3.24
3.00 - 3.49	1,341	44%	1041	78%	44%	2.73	2.70
2.50 - 2.99	638	21%	429	67%	18%	2.29	2.24
Below 2.50	109	4%	62	57%	3%	2.13	2.02
Subtotal	3,041	100%	2,361	78%	100%	2.79	2.76
Null HS GPA	38		34	89%		3.02	2.98
Total	3,079		2,395	78%		2.80	2.77

High School GPA Below 3.00, by Admission Type:

High School GPA	Cohort		First-year Retention			Cumulative UNLV GPA	
	(#)	(% dist)	(#)	(% retained)	(% dist)	(avg end of first sem)	(avg end of first year)
3.00 and Above	2,294	75%	1,870	82%	79%	2.96	2.93
Below 3.00	747	25%	491	66%	21%	2.27	2.21
Alternate Criteria Admits	414		278	67%		2.19	2.17
Admit by Committee	46		34	74%		2.33	2.40
Automatic Admit	368		244	66%		2.18	2.15
Regular Criteria Admits	333		213	64%		2.36	2.26
Regular Admit	220		144	65%		2.43	2.30
Admit by Test Scores	113		69	61%		2.22	2.18
Total	3,041	100%	2,361	78%	100%	2.79	2.76

Notes: 1) Includes first-time, full-time, baccalaureate-degree-seeking freshmen.

2) Includes summer admits.

Source: Student Information System, UNLV EPM, IAP Data Warehouse
 Institutional Analysis and Planning, April 2011

First-year Educational Outcomes of New Freshmen by Core High School GPA
Fall 2009 Cohort

Core HS GPA	Cohort		First-year Retention			Cumulative UNLV GPA	
	(#)	(% dist)	(#)	(% retained)	(% dist)	(avg end of first sem)	(avg end of first year)
3.50 and Above	1596	53%	1348	84%	58%	3.09	3.06
3.00 - 3.49	867	29%	627	72%	27%	2.56	2.50
2.50 - 2.99	400	13%	272	68%	12%	2.27	2.21
Below 2.50	122	4%	71	58%	3%	2.10	2.09
Subtotal	2,985	100%	2,318	78%	100%	2.79	2.76
Null Core HS GPA	94		77	82%		2.96	3.03
Total	3,079		2,395	78%		2.80	2.77

Core HS GPA Below 3.00, by Admission Type:

Core HS GPA	Cohort		First-year Retention			Cumulative UNLV GPA	
	(#)	(% dist)	(#)	(% retained)	(% dist)	(avg end of first sem)	(avg end of first year)
3.00 and Above	2,463	83%	1,975	80%	85%	2.90	2.87
Below 3.00	522	17%	343	66%	15%	2.23	2.18
Alternate Criteria Admits	392		262	67%		2.21	2.17
Admit by Committee	52		38	73%		2.41	2.41
Automatic Admit	340		224	66%		2.18	2.14
Regular Criteria Admits	130		81	62%		2.29	2.20
Regular Admit	25		16	64%		2.55	2.18
Admit by Test Scores	105		65	62%		2.23	2.20
Total	2,985	100%	2,318	78%	100%	2.79	2.76

Notes: 1) Includes first-time, full-time, baccalaureate-degree-seeking freshmen.

2) Includes summer admits.

Source: Student Information System, UNLV EPM, IAP Data Warehouse
 Institutional Analysis and Planning, April 2011

**First-year Educational Outcomes of New Freshmen by Application Date
Fall 2009 Cohort**

Application Date	Cohort		First-year Retention		Cumulative UNLV GPA	
	(#)	(% dist)	(#)	(% retained)	(avg end of first sem)	(avg end of first year)
Summer	41	1%	35	85%	3.11	2.97
Very Early	504	16%	427	85%	2.98	2.95
Early	828	27%	657	79%	2.87	2.84
Middle	608	20%	468	77%	2.79	2.78
Late	881	29%	660	75%	2.66	2.60
Very Late	210	7%	142	68%	2.56	2.59
Subtotal	3,072	100%	2,389	78%	2.80	2.77
Null Date	7		6	86%	2.76	2.48
Total	3,079		2,395	78%	2.80	2.77

Core HS GPA Below 3.00:

Application Date	Cohort		First-year Retention		Cumulative UNLV GPA	
	(#)	(% dist)	(#)	(% retained)	(avg end of first sem)	(avg end of first year)
Summer	7	1%	7	100%	3.05	2.61
Very Early	44	8%	33	75%	2.47	2.44
Early	107	21%	70	65%	2.22	2.17
Middle	102	20%	63	62%	2.24	2.21
Late	212	41%	140	66%	2.17	2.12
Very Late	47	9%	27	57%	2.04	2.08
Subtotal	519	100%	340	66%	2.23	2.18
Null Application Date	3		3	100%	2.48	2.08
Total	522		343	66%	2.23	2.18

Notes: 1) Includes first-time, full-time, baccalaureate-degree-seeking freshmen.

2) All summer admits are reported under 'Summer'.

3) Application Fee Date was used as a proxy for application date, with the following categorization: Very Early - 1/1/2008 to 10/31/2008; Early - 11/1/2008 to 12/31/2008; Middle - 1/1/2009 to 2/1/2009; Late - 2/2/2009 to 5/31/2009; Very Late - 6/1/2009 and later.

4) Small cohort counts may limit generalizability of results.

Source: Student Information System, UNLV EPM, IAP Data Warehouse

Institutional Analysis and Planning, April 2011

First-year Educational Outcomes of New Undergraduate Transfers by Transfer GPA Fall 2009 Cohort

Transfer GPA	Cohort		First-year Retention			Cumulative UNLV GPA	
	(#)	(% dist)	(#)	(% retained)	(% dist)	(avg end of first sem)	(avg end of first year)
3.50 and Above	376	18%	292	78%	18%	3.38	3.38
3.00 - 3.49	891	42%	666	75%	42%	3.02	3.02
2.50 - 2.99	726	34%	542	75%	34%	2.70	2.72
Below 2.50	140	7%	102	73%	6%	2.79	2.83
Subtotal	2,133	100%	1,602	75%	100%	2.96	2.97
Null/Excluded Transfer GPA	337		181	54%		3.11	3.06
Total	2,470		1,783	72%		2.98	2.98

Transfer GPA Below 2.50, by Admission Type:

Transfer GPA	Cohort		First-year Retention			Cumulative UNLV GPA	
	(#)	(% dist)	(#)	(% retained)	(% dist)	(avg end of first sem)	(avg end of first year)
2.50 and Above	1,993	93%	1,500	75%	94%	2.97	2.98
Below 2.50	140	7%	102	73%	6%	2.79	2.83
Alternate Criteria Admits	68		51	75%		2.66	2.66
Admit by Committee	43		31	72%		2.69	2.63
Automatic Admit	25		20	80%		2.60	2.72
Regular Criteria Admits	72		51	71%		2.90	3.00
Regular Admit	71		51	72%		2.92	3.00
Admit by Test Scores	1		0	0%		1.68	-
Total	2,133	100%	1,602	75%	100%	2.79	2.76

Notes: 1) Includes new full-time and part-time baccalaureate-degree-seeking transfers.

2) Includes summer admits.

3) Excludes records with transfer GPAs known to be miscalculated on SIS.

Source: Student Information System, UNLV EPM, IAP Data Warehouse

Institutional Analysis and Planning, April 2011

**First-year Educational Outcomes of New Undergraduate Transfers by Application Date
Fall 2009 Cohort**

Application Date	Cohort		First-year Graduation		First-year Retention		Retained + Graduated		Cumulative UNLV GPA	
	(#)	(% dist)	(#)	(% graduated)	(#)	(% retained)	(#)	(%)	(avg end of first sem)	(avg end of first year)
Summer	322	13%	15	5%	230	71%	245	76%	3.13	3.18
Very Early	344	14%	3	1%	257	75%	260	76%	2.88	2.85
Early	187	8%	4	2%	144	77%	148	79%	2.96	3.01
Middle	271	11%	4	1%	207	76%	211	78%	3.02	3.02
Late	875	36%	13	1%	620	71%	633	72%	2.98	3.00
Very Late	463	19%	8	2%	301	65%	309	67%	2.95	2.93
Subtotal	2,462	100%	47	2%	1,759	71%	1,806	73%	2.99	2.99
Null Date	51		1	2%	36	71%	37	73%	2.92	2.92
Total	2,513		48	2%	1,795	71%	1,843	73%	2.98	2.99

Notes: 1) Includes new full- and part-time, degree- and certificate seeking transfers.

2) All summer admits are reported under 'Summer'.

3) Application Fee Date was used as a proxy for application date, with the following categorization: Very Early - 1/1/2008 to 10/31/2008; Early - 11/1/2008 to 12/31/2008; Middle - 1/1/2009 to 2/1/2009; Late - 2/2/2009 to 5/31/2009; Very Late - 6/1/2009 and later.

4) Small cohort counts may limit generalizability of results.

Source: Student Information System, UNLV EPM, IAP Data Warehouse
Institutional Analysis and Planning, June 2011