Peak Time and Class Level of Withdrawals
-- A New Perspective for Attrition

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What's New?

Explore factors relating to student drop-outs

Focus on first college year

Find peak time and class level of withdrawals

Identify high risk groups

Cohort File Development

Background

- Demographic Information (ethnicity, gender and low-income)
- Academic Background (HS GPA, Transfer GPA, remediation)

First College Year

- Commuter/Living on campus
- Full-time/Part-time
- First Declared Major
- First Year Programs

Tracking by Semester

- Enrollment Status
- Major
- Cumulative GPA
- Academic Standing
- Unit completion

Graduation

- Degree Year
- Degree Major
- Degree GPA
- Degree Units

Total Withdrawals and Peak Time Withdrawals

Table 1 Withdrawals of Native Freshmen and Transfers

	Withdrawals		Retained or Graduated		Total	Total
	Count	%/Mean	Count	%/Mean	Headcount	Withdrawal
Native Freshmen (within 6 years)						
Cohort 2003	1,106	45.3%	1,337	54.7%	2,443	
Cohort 2004	1,103	47.1%	1,239	52.9%	2,342	
Cohort 2005	1,214	48.2%	1,306	51.8%	2,520	
Three Cohorts	*3,423*	*46.9%*	*3,882*	*53.1%*	*7,305*	
Peak Time (1-year)	*921*	*26.9%*				*3,423*
Transfers (within 4 years)						
Cohort 2005	948	32.0%	2,016	68.0%	2,964	
Cohort 2006	1,131	33.0%	2,294	67.0%	3,425	
Cohort 2007	1,107	32.5%	2,296	67.5%	3,403	
Three Cohorts	*3,186*	*32.5%*	*6,606*	*67.5%*	*9,792*	
1st Peak Time (after first term)	*706*	*22.2%*				*3,186*
2nd Peak Time (after 2 terms)	*795*	*25.0%*				*3,186*

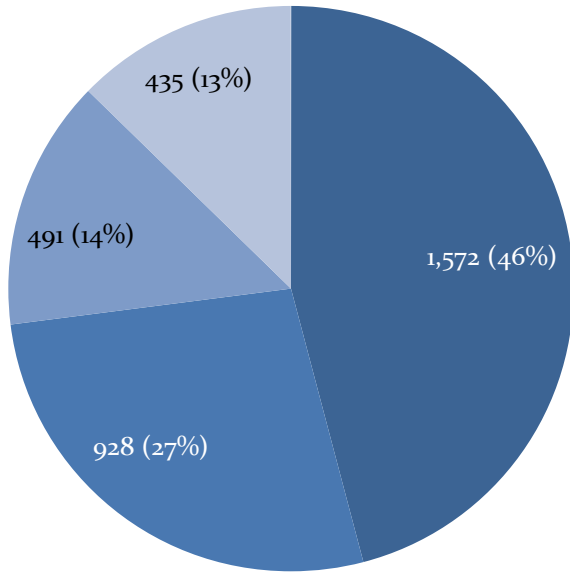# *Peak Time of Withdrawals*

Distribution of Withdrawals by Semester
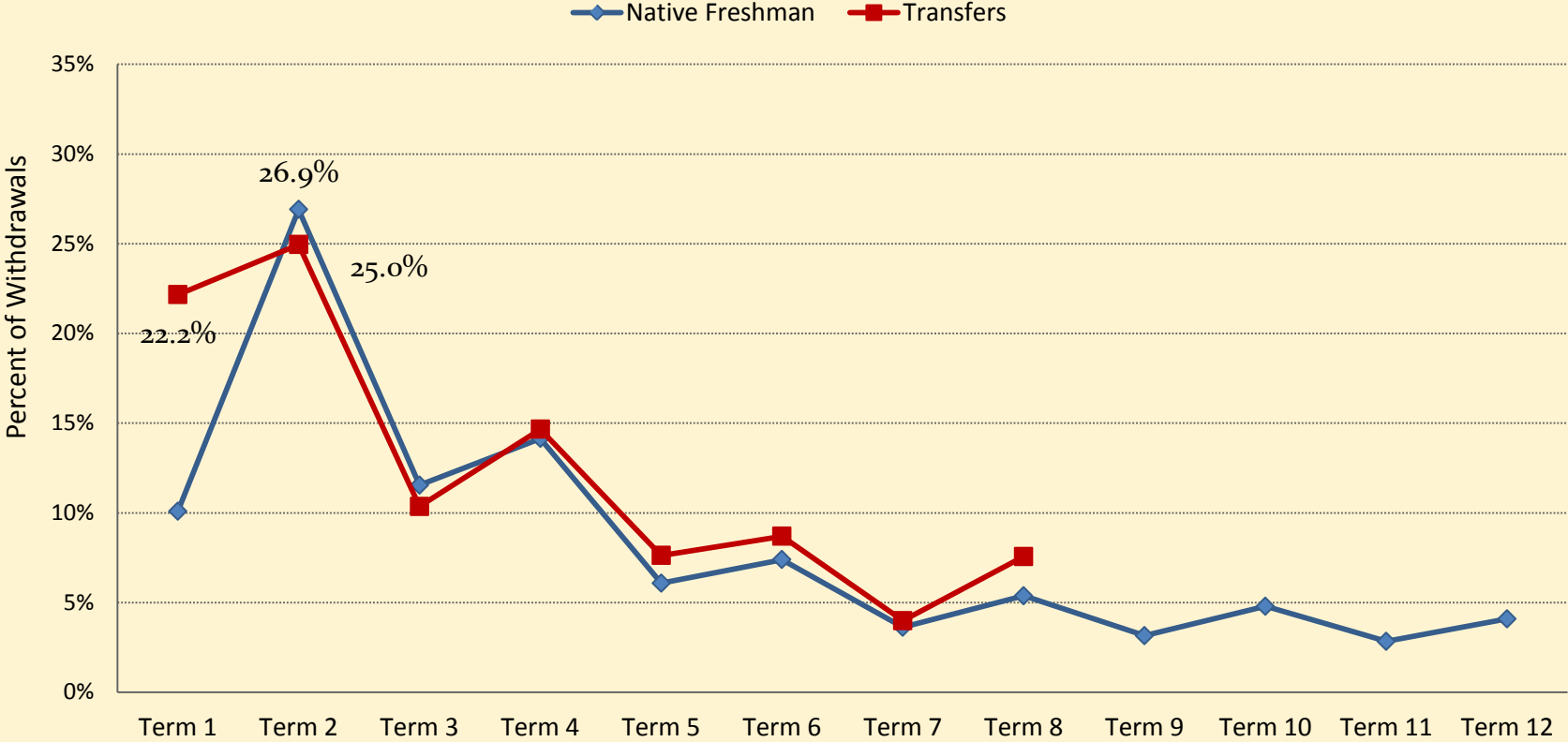
Class Level of Withdrawals

Class Level of Withdrawals
(Within 6-Years for Native Freshmen)

■ Freshmen ■ Sophomore ■ Junior ■ Senior

435 (13%)
1,572 (46%)
491 (14%)
928 (27%)

Class Level of Withdrawals
(Within 4-Years for Transfers)

■ Freshmen ■ Sophomore ■ Junior ■ Senior

54 (2%)
220 (7%)
1,046 (34%)
1,729 (57%)
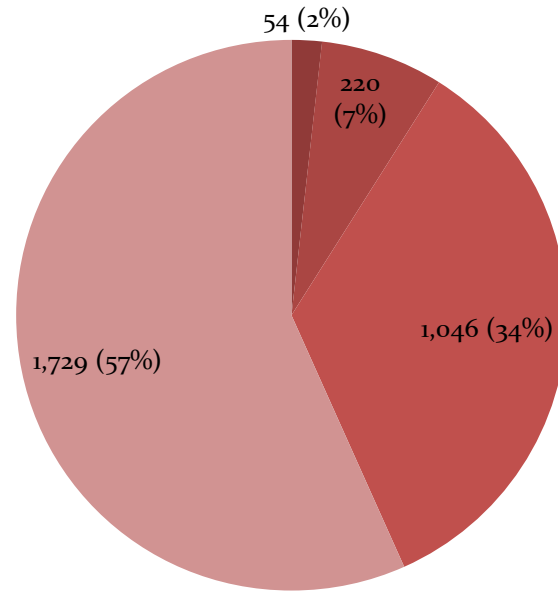
Profile of Peak Time Withdrawals
(Native Freshmen)

Demographic Traits	Unit Completion	Performance & Activities
• Male students had an attrition rate of 16%, which is 4% higher than that of female students. • Students from academically challenged backgrounds were more likely to drop out by the end of their second semester.	• Part-time students had an attrition rate of 28% compared to a 13% attrition rate for full-time students. • By the end of their 2nd semester, students who withdrew completed an average of 17 units compared to an average of 26 units completed by retained students.	• Students whose GPAs were below 2.0 from the first to second semester had a significantly higher attrition rate. • Students who did not participate in first-year programs had higher attrition rates than participants. • Students who declared their first major in the College of Engineering and Computer Science had the highest rate of attrition (18%) among the six colleges.

Regression Model 1 (Native Freshmen)

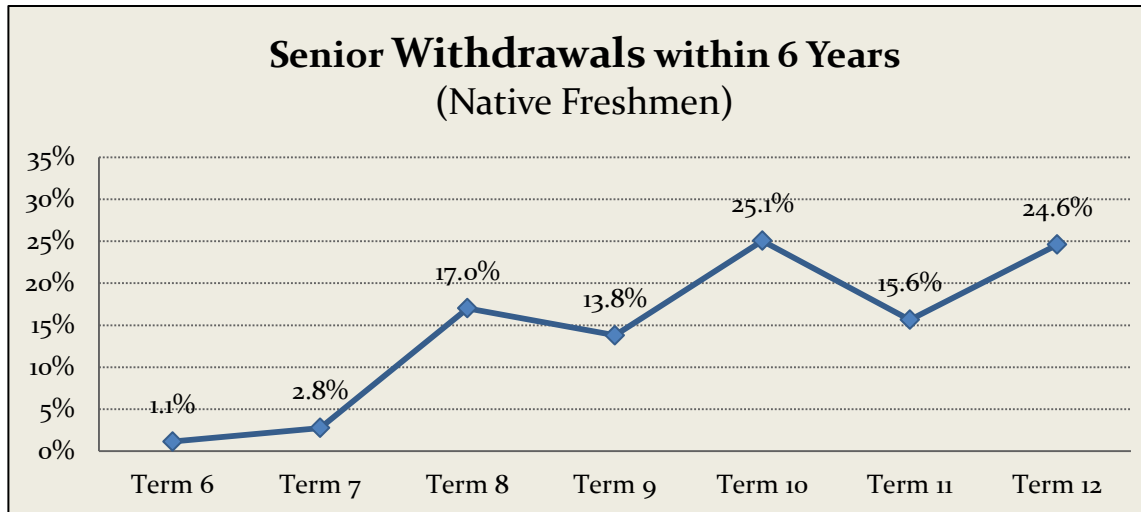**Table 2   Regression Model: Peak Time of Withdrawals**

Predict Variables	B	S.E.	Wald	df	Sig.	Exp(B)	Odds Ratio	Rank
Commuter(1)	.237	.100	5.599	1	.018	1.267	1.3	5
Need Remediation (1)	1.008	.186	29.499	1	.000	2.741	2.7	2
SAT Math Score	-.002	.001	9.170	1	.002	.998	1.0	
1st term Good Standing (1)	.443	.115	14.734	1	.000	1.557	1.6	4
2nd term Good Standing (1)	.824	.121	46.248	1	.000	2.281	2.3	3
Completed Remediation(1)	-1.043	.134	60.572	1	.000	.353	2.8	1
Units at Two terms	-.147	.009	273.141	1	.000	.863	1.2	6
Constant	3.120	.430	52.637	1	.000	22.656		

Model Indicators								
Baseline P*	13.8%			Chi-Square (df)			1260.226(7)	
Model N	5,486			Pseudo R^2			.205-.372	
2log L	3135.432			% Correctly predicted			81.9%	

* Refers to attrition rate of 2nd term.

Profile of Senior Withdrawals (Native Freshmen)

Table 3 Senior Withdrawals within 6 years (Native Freshmen)

	Senior Withdrawals		Total Withdrawals	Change
	Count	%		
Cohort 2003	160	14.5%	1,106	
Cohort 2004	136	12.3%	1,103	-2.1%
Cohort 2005	139	11.4%	1,214	-0.9%
Three Cohorts	*435*	*12.7%*	3,423	
Peak Time (5th year)	*109*	*25.1%*		
Peak Time (6th year)	*107*	*24.6%*		

Senior Withdrawals within 6 Years
(Native Freshmen)

Term	%
Term 6	1.1%
Term 7	2.8%
Term 8	17.0%
Term 9	13.8%
Term 10	25.1%
Term 11	15.6%
Term 12	24.6%

Regression Model 2 (Native Freshmen)

Table 4   Regression Model: Senior Withdrawals at the End of Furth Year (Native Freshmen)

Predict Variables	B	S.E.	Wald	df	Sig.	Exp(B)	Odds Ratio	Rank
Gender	-.764	.258	8.754	1	.003	.466	2.1	3
Commuter	.892	.243	13.480	1	.000	2.440	2.4	2
10th term Good Standing	2.732	.530	26.578	1	.000	15.368	15.4	1
Units of Nine terms	.118	.032	13.755	1	.000	1.125	1.1	4
Units of Ten terms	-.136	.030	20.701	1	.000	.873	1.1	4
Constant	.416	.984	.179	1	.672	1.516		
Model Indicators								
Baseline P*	4.8%			Chi-Square (df)			82.420 (5)	
Model N	1,802			Pseudo R^2			.045-.146	
-2log L	578.440			% Correctly predicted			74.6%	

* Refers to senior attrition rate of fifth year.

Regression Model 3 (Native Freshmen)

Table 5   Regression Model: Senior Withdrawals at the End of Fifth Year (Native Freshmen)

Predict Variables	B	S.E.	Wald	df	Sig.	Exp(B)	Odds Ratio	Rank
Commuter(1)	.590	.287	4.231	1	.040	1.805	1.8	3
SAT Math Score	-.004	.002	7.953	1	.005	.996	1.0	
Learning Community(1)	-.700	.349	4.016	1	.045	.497	2.0	2
12th term Good Standing (1)	1.403	.534	6.896	1	.009	4.066	4.1	1
Units of 11 terms	.194	.031	39.061	1	.000	1.214	1.2	4
Units of 12 terms	-.204	.030	46.657	1	.000	.815	1.2	4
Constant	3.349	1.199	7.800	1	.005	28.486		
Model Indicators								
Baseline P*		10.0%		Chi-Square (df)			87.938 (6)	
Model N		832		Pseudo R^2			.100 -.219	
-2log L		420.649		% Correctly predicted			76.1%	

* Refers to senior attrition rate of sixth year.

Profile of Withdrawals (Transfers)
First & Second Peak Time

Background

- Under-represented minorities (URM) had higher attrition than non-URM.
- Often less prepared: exceptionally admitted, low transfer GPAs, lower division transfers
- Students who transferred from other 4-year institutions had an attrition rate which was 5% higher than those who had transferred from community colleges.

Unit Completion

- The attrition rate of part-time students was 9% and 4% higher than that of full-time students during the first and second peak times.
- Withdrawals completed an average of 6 units by the end of their 1st semester compared to an average of 11 units completed by retained students.
- Withdrawals completed an average of 15 units by the end of their 2nd semester compared to an average of 23 units completed by retained students.

Performance & Activities

- 1st Semester Good Standing: The rate of Withdrawals was 19% lower than the rate of retained students
- 2nd Semester Good Standing: The rate of Withdrawals was 14% lower than the rate of retained students
- Students who did not serve as club leaders had higher attrition at the end of the 1st and 2nd semester compared to those who had.

Regression Model 4 (Transfers)

Table 6 Regression Model 1: Withdrew by the End of First Term (Transfers)

Predict Variables	B	S.E.	Wald	df	Sig.	Exp(B)	Odds Ratio	Rank
Full- time (at first term)	-.198	.098	4.036	1	.045	.821	1.2	3
Class Level	.644	.111	33.982	1	.000	1.905	1.9	1
Units of 1 term	-.264	.011	628.607	1	.000	.768	1.3	2
Constant	-.371	.110	11.439	1	.001	.690		
Model Indicators								
Baseline P*	7.2%			Chi-Square (df)			782.689 (3)	
Model N	9,138			Pseudo R^2			.082 - .212	
-2log L	3692.596			% Correctly predicted			79.0%	

* Refers to attrition rate by the end of 1st term.

Regression Model 5 (Transfers)

Table 7 Regression Model 2: Withdrew by the End of Second Term (Transfers)

Predict Variables	B	S.E.	Wald	df	Sig.	Exp(B)	Odds Ratio	Rank
Full- time (at first term)	-.266	.110	5.847	1	.016	.767	1.3	4
Community College	.541	.107	25.667	1	.000	1.719	1.7	3
Transfer Units	-.007	.002	14.617	1	.000	.993	1.0	
Good Standing (1st)	.631	.141	19.996	1	.000	1.880	1.9	1
Good Standing (2nd)	.629	.184	11.727	1	.001	1.876	1.9	1
Units of 1st Term	.170	.020	74.079	1	.000	1.185	1.2	5
Units of Two terms	-.215	.010	444.362	1	.000	.807	1.2	5
Constant	.628	.205	9.434	1	.002	1.874		
Model Indicators								
Baseline P*	8.1%			Chi-Square (df)			993.815 (7)	
Model N	8,272			Pseudo R^2			.113 - .246	
-2log L	4101.137			% Correctly predicted			74.1%	

* Refers to attrition rate by the end of 2nd term.

Summary: Peak Time and Class Level

Peak Time

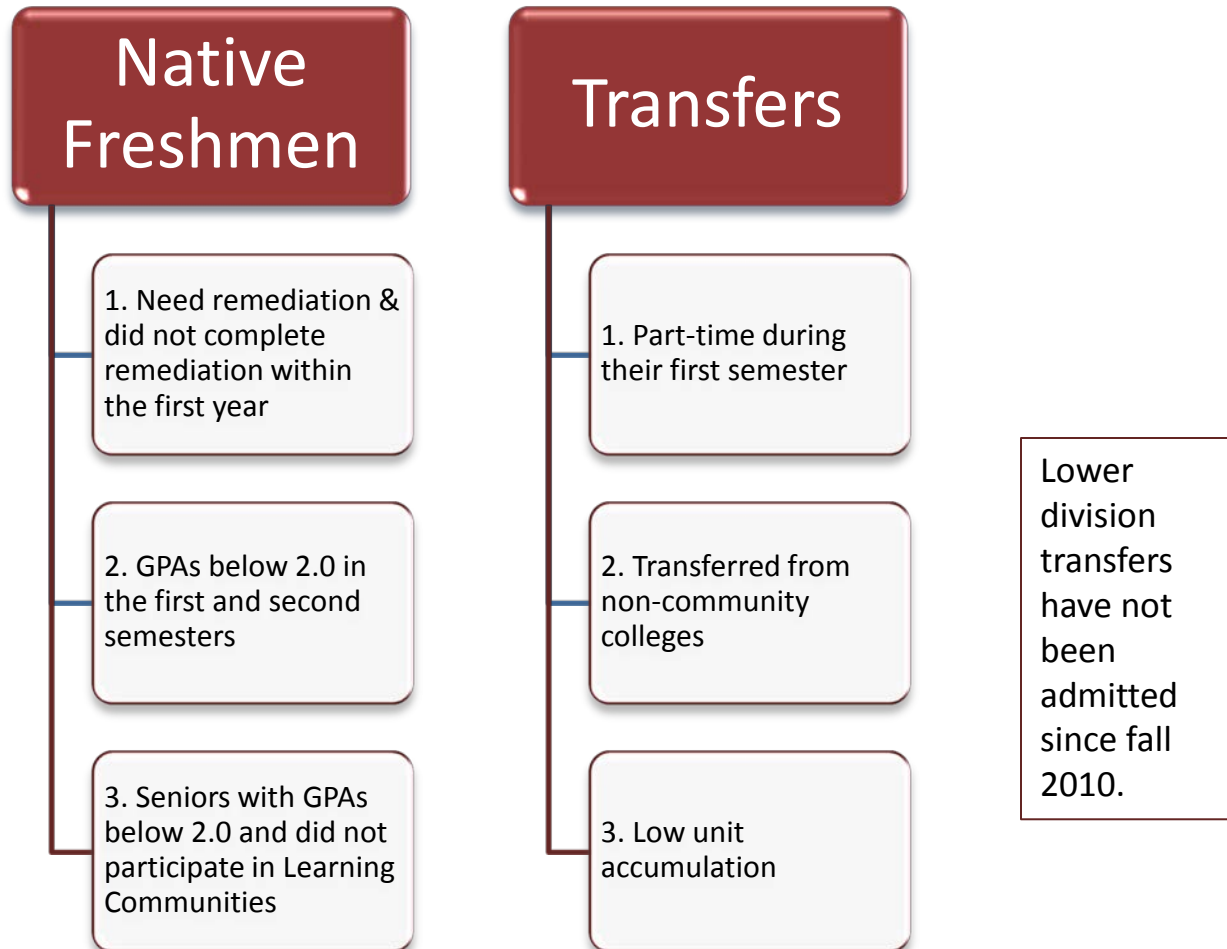Native Freshmen: 27% dropped out after the second Term

Transfers: 22% and 25% dropped out after the first and second terms, respectively

Class Level

Native Freshmen: 46% dropped out with less than 30 units; 13% dropped out at the senior level with 90 units or more.

Transfers: 57% dropped out at the senior level with 90 units or more.

Summary: High Risk Groups

Native Freshmen

1. Need remediation & did not complete remediation within the first year

2. GPAs below 2.0 in the first and second semesters

3. Seniors with GPAs below 2.0 and did not participate in Learning Communities

Transfers

1. Part-time during their first semester

2. Transferred from non-community colleges

3. Low unit accumulation

Lower division transfers have not been admitted since fall 2010.

Interventions: Native Freshmen

Facilitate progress of students in need of remediation to complete their remedial courses within their first year

Encourage students to participate in First Year Programs, especially in Learning Communities
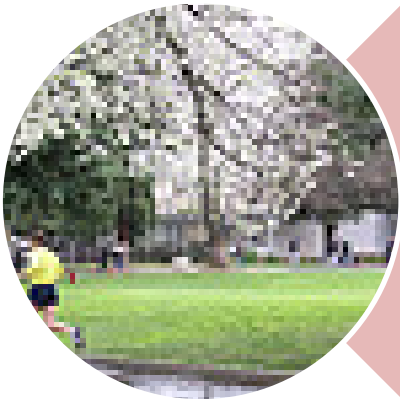
Provide enhanced assistance to seniors placed on academic probation during their 5th and 6th years

Interventions: Transfers

Advise students to maintain full-time status for at least at the first semester

Encourage students to complete at least 12 units each semester during their first year

Interventions: Both

Focus on students placed on academic probation during their 1st and 2nd semesters

Extend intervention programs to the second semester

Questions???

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