

Too “fresh” or too smart? Freshmen taking on upper-division courses

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Many students at Fresno State take courses out of sequence of their Road Maps. Lower-division (LD) students are taking upper-division (UD) courses, [while UD students are taking LD courses](#).

Ordinarily, curricula are designed to be progressive—foundational knowledge is needed before attempting to acquire higher level skills. Consequently, when students take courses out of sequence, results can be negative for both faculty and students. UD students taking lower division courses may be bored and engage little in the class. LD students taking UD classes can result in an unevenly prepared class, which makes teaching more difficult. UD students may find those courses less challenging than expected, and LD students who just may not be ready to jump so far ahead in their educational path may be overwhelmed. With Fresno State’s focus on student success, IRAP noticed this pattern of inverted course-taking and wondered; does the taking of UD courses by freshmen affect their success?

To answer this question, we analyzed the performance of full-time, first-time freshmen (FTFTF) who enrolled in UD classes during their first year. The sample included six fall cohorts (2002 – 2007).

Almost a quarter (22% – 26% based on a cohort year) of FTFTF completed at least one UD course during their first two semesters. However, a large number of those courses included UD levels of athletics, music, theater arts, or recreation studies. Those seem to be courses that are normal for freshmen to take based on the road maps and the proportions of freshmen enrolled. Excluding ATHL, MUSIC, DANCE, DRAMA, KAC, RLS and ASCI subjects from the analysis, about 10 to 12% of FTFTF took UD courses during their first year of enrollment (Table 1).

FTFTF who took UD courses had the same or a slightly higher level of preparation and about the same first-term GPA and first-year retention rates as the freshman cohort overall. However, their four-year graduation rates were noticeably higher (on average 8% higher). A data mining model constructed for the first three cohorts to predict a 4-year graduation outcome showed that taking a UD course was a significant factor in completion, particularly for FTFTF with a high school GPA in the 3.66 to 3.96 range. Those freshmen who took a UD course had a 14% higher probability of graduating in four years

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TABLE 1: Preparation and performance of FTFTF who took upper-division courses (excluding ATHL, MUSIC, DANCE, DRAMA, KAC, RLS and ASCI) during their first year of enrollment

	Fall 2002	Fall 2003	Fall 2004	Fall 2005	Fall 2006	Fall 2007	Overall
Headcount	271	301	259	229	284	308	1,652
% of FTFTF	12%	12%	12%	10%	11%	12%	12%
Avg. HS GPA	3.35	3.29	3.41	3.33	3.39	3.35	3.35
% ELM Remedial	57%	49%	49%	48%	52%	53%	51%
% EPT Remedial	52%	40%	54%	55%	55%	56%	52%
Avg. 1st Term GPA	2.84	2.75	2.99	2.72	2.82	2.69	2.80
1yr Retention	81.2%	82.1%	86.9%	84.3%	82.0%	78.9%	82.4%
4yr Graduation	21.0%	20.6%	29.3%				23.5%

TABLE 2: FTFTF who passed upper-division courses (excluding ATHL, MUSIC, DANCE, DRAMA, KAC, RLS and ASCI) versus those who failed

		Fall 2002	Fall 2003	Fall 2004	Fall 2005	Fall 2006	Fall 2007	Overall
Passed UD Course	Headcount	215	238	217	180	229	239	1,318
	% of Total	79%	79%	84%	79%	81%	78%	80%
	Avg. HS GPA	3.43	3.34	3.47	3.40	3.44	3.40	3.41
	1 yr Retention	89.8%	89.9%	93.1%	92.8%	92.1%	88.3%	90.9%
	4yr Graduation	25.1%	25.2%	33.2%				27.8%
Failed UD Course	Headcount	56	63	42	49	55	69	334
	% of Total	21%	21%	16%	21%	19%	22%	20%
	Avg. HS GPA	3.02	3.10	3.10	3.06	3.15	3.15	3.10
	1 yr Retention	48.2%	52.4%	54.8%	53.1%	40.0%	46.4%	48.8%
	4yr Graduation	5.4%	3.2%	9.5%				5.6%
Total Course Takers		271	301	259	229	284	308	1652

compared to those who didn't take a UD course and had a similar HS GPA.

About 80% of FTFTF passed UD courses with a C or better. This is lower than the 90% overall passing rate for all UD courses (excluding the above mentioned subjects). Freshmen who passed were typically more prepared students and eventually had higher retention and graduation rates than the university's overall rates. Those FTFTF who failed upper-division courses had a very low first-year retention rate: about 55% or less and their four-year graduation rate was below 10% (Table 2 - above). It should be noticed though that this is a relatively small number of students.

We were also interested in how well FTFTF were doing in UD courses compared to other students enrolled in the same courses. For this purpose, we focused on five upper-division courses with the highest number of FTFTF enrolled during the last 6 years: CRIM 120, CFS 133S, PHTH 105, PSYCH 166, and PSYCH 101 (Table 3). Noticeably, FTFTF earned lower grades than UD students enrolled in the same courses. On average for the five subjects combined, FTFTF earned 2.24 grade points versus 2.85 for UD students (Table 3). About 70% of all UD courses in which freshmen are enrolled (excluding the subjects listed) show this pattern. However, the overall GPA of FTFTF UD course takers and non-course takers is similar.



Those FTFTF who are failing the UD courses tend to be less prepared for college and are likely to be retained and graduate at considerably lower rates.

In conclusion, FTFTF who take and pass UD courses during their first year complete their degree in four years at higher rates. Those FTFTF who are failing the UD courses tend to be less prepared for college and are likely to be retained and graduate at considerably lower rates. FTFTF also tend to earn lower grades in those courses compared to UD students.

TABLE 3: FTFTF performance in selected upper-division courses compared to other student levels (Aggregated counts for fall 2002 – spring 2007)

Course	Total UGRD Enrolled	% of Students			Average Course Grade Points		
		FTFTF (N, %)	Other LD	UD	FTFTF	Other LD	UD
CFS 133S – Child Fam Crisis	2339	35 (1%)	25%	73%	3.00	3.15	3.31
CRIM 120 – Juvenile Delinq	4615	37 (1%)	21%	78%	1.86	2.59	2.72
PHTH 105 – Med Terminology	870	24 (3%)	24%	73%	2.29	2.42	2.68
PSYCH 101 – Child Psych	708	34 (5%)	17%	78%	1.41	2.04	2.52
PSYCH 166 – Abnormal Psych	2120	35 (2%)	21%	77%	2.65	2.62	2.83
Overall	10652	165 (2%)	22%	76%	2.24	2.69	2.85

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