

IM-IR

Research Brief

Volume 4 Number 5, May 1997

IUPUI Undergraduate Student Retention and Graduation Rates

Table of Contents

Highlights	Introduction
Traditional Measures and their Extensions <ul style="list-style-type: none"> • One-Year Retention Rates • Six-Year Graduation Rates • National Comparisons 	Further Limitations of Traditional Retention and Graduation Rates <ul style="list-style-type: none"> • Origin of New Students at IUPUI • "Stopping Out"
Important Correlates of Retention and Graduation <ul style="list-style-type: none"> • Retention into a Major • Course Performance 	Alternative Measures of Student Persistence and Graduation <ul style="list-style-type: none"> • One-Year Retention Rates Adjusted for Student Body Characteristics • Markov-Chain Model of Graduation Rates
Why Students Don't Return <ul style="list-style-type: none"> • Non-Returning Student Survey • Differences in Satisfaction Between Returning and Non-Returning Students 	Conclusions and Recommendations
	Appendices

Displays

- [Table 1](#): One Year Retention Rates at Indiana University
- [Table 2](#): Point of Departure for Fall 1995 First-Time Freshman
- [Table 3](#): IUPUI First Time Freshman One-Year Retention Rate by Ethnicity and Age

- [Table 4:](#) IUPUI First Time Freshman One Year Retention Rate by Initial Major Type and Various Performance Characteristics
- [Table 5:](#) Six-Year Graduation Rates at Indiana University
- [Table 6:](#) IUPUI First-Time Freshman Six-Year Graduation Rate by Ethnicity, Gender and Age
- [Table 7:](#) IUPUI First-Time Freshman Six-Year Graduation Rate by Initial Major Type and Various Performance Characteristics
- [Table 8:](#) National Graduation Rate Comparisons from the AASCU / Sallie Mae Survey
- [Table 9:](#) Mode and Entry Semester, All New IUPUI Students, 1995-96
- [Table 10:](#) Likelihood of Returning According to Point of Departure
- [Table 11:](#) Percent of Students Persisting into and through a Major
- [Table 12:](#) Courses with the Highest DWF Rates, Fall 1995 and Spring 1996 Combined
- [Table 13:](#) Courses with Lowest Associated Persistence Rates, Fall 1995 and Spring 1996 Combined
- [Table 14:](#) Courses with Highest Difference in DWF Rates Between Dropouts and Persisters, Fall 1995 and Spring 1996 Combined
- [Table 15:](#) Unadjusted and Adjusted One-Year Retention Rates by School
- [Table 16:](#) Unadjusted and Adjusted Retention Rates Among Freshmen, Fall 1995 to Fall 1996
- [Table 17:](#) Markov-Chain Modeled Graduation Rates
- [Table 18:](#) Changes in Credit Load and GPA Distribution Between Fall 1995 and Fall 1996 Freshmen
- [Table 19:](#) Modeled Changes in Retention and Graduation Rates by Upward Shifts in Grade
- [Table 20:](#) Transfer Rate Among Non-Returning Students
- [Table 21:](#) Destination Institution of Non-Returning Students
- [Table 22:](#) Reasons for Transferring
- [Table 23:](#) Main Reasons for Not Returning to IUPUI, All Non-Returnees Combined
- [Table 24:](#) Main Reasons for Not Returning to IUPUI, Students Who Transferred Compared to Those Who Did Not Enroll Anywhere
- [Table 25:](#) Main Reasons for Not Returning to IUPUI, Freshman Compared to All Others
- [Table 26:](#) Percent of Students Citing Work and Family Obligations as a Reason for Not Returning When Asked Directly
- [Table 27:](#) Specific Work and Family Obligations Mentioned
- [Table 28:](#) Suggested Areas for Improvement Made by Non-Returning Students

- [Figure 1:](#) One Year Retention Rates at Indiana University
- [Figure 2:](#) Six-Year Graduation Rates at Indiana University
- [Figure 3:](#) Comparative Urban University One-Year Retention Rates Among Fall 1994 First-Time Freshmen
- [Figure 4:](#) Comparative Urban University Six-Year Graduation Rates Among Fall 1990 First-Time Freshmen

Highlights

- IUPUI's one-year retention and six-year graduation rates are low by many standards. This is especially true for cohorts of first-time, full-time freshman, the focus of most comparative studies.
- There has been a recent upswing in one-year retention rates, but these changes are not going to affect six-year graduation rates for at least another five years.
- The low retention and graduation rates are closely related to the high rates of failure, especially within first-year courses.
- Like many institutions, IUPUI loses about one-half of those who ever drop out before the second year. Unlike many institutions, IUPUI loses many students between the fall and spring semester of the first year. However, relatively few students withdraw during the first semester.
- In national comparisons, IUPUI has very low first-time freshmen graduation rates. However IUPUI compares favorably with regard to part-time freshmen and transfer student graduation rates.
- Alternative measures of retention and graduation considered in this report provide an ability to model how changes in student performance will affect retention and graduation rates. These models show that increased levels of student success in courses is important, but there are other dimensions of student persistence that must be addressed to attain any significant overall improvements in the rates.
- Typically, one-quarter of students who don't return to IUPUI transfer elsewhere. Half of these transfers move to the Bloomington campus.
- Students who leave IUPUI for other institutions are most likely to cite problems in getting into a desired major and a lack of satisfaction with the commuter environment.
- Increasing numbers of non-returning, non-transferring students are citing an inability to handle concurrent school, work and family obligations. Finance and cost issues are also cited by significant but decreasing numbers of this group.

(Back to [Table of Contents](#), [List of Displays](#))

Introduction

Undergraduate student retention and graduation rates have taken on increasing importance as barometers of institutional effectiveness for U.S. colleges and universities. Federal Regulations such as the Student Right-to-Know Act (SRKA), NCAA reporting requirements, state-level funding initiatives, and commercial college rankings such as those of [U.S. News & World Report](#) have contributed, for better or worse, to the preeminence of these measures.

Like most measures related to higher education, retention and graduation rates were developed to reflect the traditional college experience: full-time attendance at a residential college among college-prepared high school graduates with few concurrent obligations. Nationwide declines in retention and graduation rates may well reflect the inadequacy of the traditional model more than changes in institutional effectiveness.

The lack of fit between retention measures and college realities is perhaps greatest at urban and metropolitan area colleges and universities like IUPUI: institutions that enroll large numbers of non-traditional students. But, there is only so far one can go in 'blaming the measures' for underlying problems in student performance and persistence. Given the large percentage of students who leave college after one year and the relatively small percentage who finish a degree within six years, the IUPUI community must come to understand better how and why students progress or fail to progress through their college studies.

This issue of *Research Brief* provides a comparative and contextual analysis of retention and

graduation rates for IUPUI undergraduate students. The exploration begins with traditional measures of student persistence along with several modifications extending these measures to less traditional populations. The analysis then considers some of the limitations to the traditional measures as well as some of the significant correlates of retention and graduation. The fourth section of the report presents alternative measures of student retention and graduation that may better suit the non-traditional IUPUI student population. This is followed by an examination of the reasons for leaving provided by non-returning students over the last four years. Finally, the report offers several conclusions and recommendations to focus our campus efforts on improving student learning and achievement.

(Back to [Table of Contents](#), [List of Displays](#))

Traditional Measures and Their Extensions

National and statewide measures of student retention and graduation have focused largely on the progress of first-time, full-time, baccalaureate degree-seeking freshmen through one year (retention) and six years (graduation) of college. Like many colleges and universities, [Indiana University](#) conducts analyses of these rates annually. These analyses track students across all eight campuses of the university system. This offers two advantages: it provides a basis for comparison, as well as the ability to track students who transfer among the IU campuses.

The IU retention and graduation rate analyses go beyond the traditional first-time, full-time freshman cohort by considering persistence among part-time freshmen and transfer students. The current report explores several additional issues to provide a more complete context for interpreting these measures.

(Back to [Table of Contents](#), [List of Displays](#))

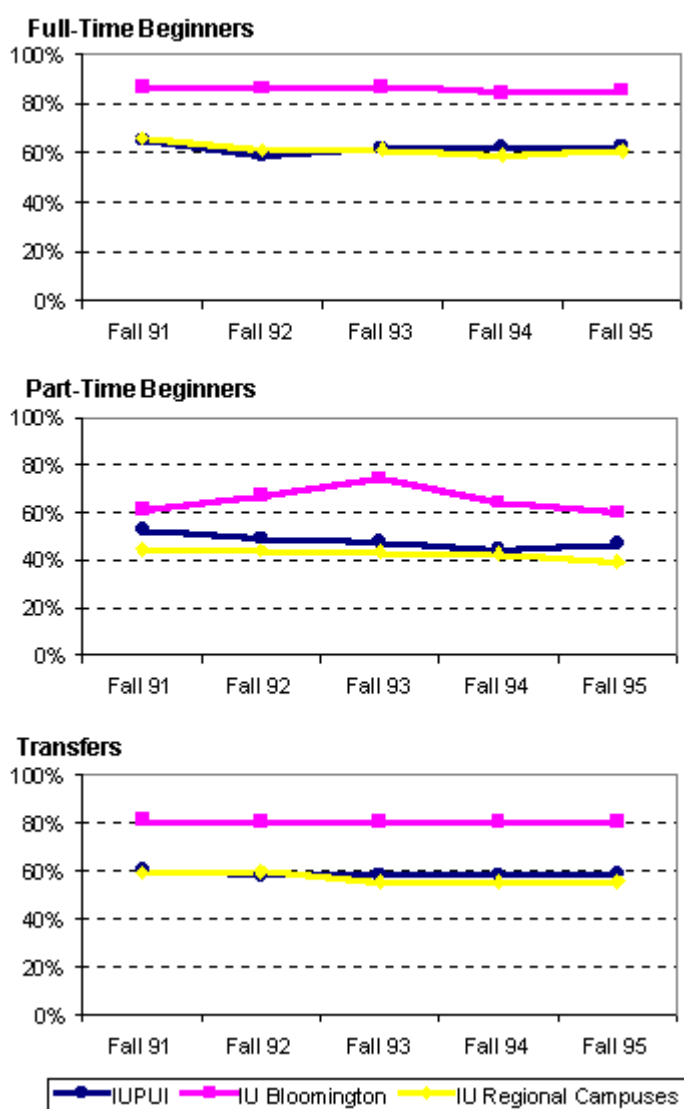
One-Year Retention Rates

The research literature on student persistence in college demonstrates clearly the importance of students' first year experience on persistence through college. Typically, one-half of all students who fail to complete college leave before beginning their second year. For this reason, retention to the second year has become the focus of measuring retention.

Comparative Trends. Table 1 shows the trends in one-year retention rates at IUPUI compared to the Bloomington campus and all IU regional campuses combined. The one-year retention rate is here considered for the traditional cohort of full-time, first-time freshmen as well as for part-time freshmen and all transfers. (Note: Transfers are students who have prior college experience at a university other than IU. Transfers among IU campuses are not considered new students as they are tracked from the campus of their initial IU enrollment throughout their academic career at IU.) Figure 1 illustrates these trends graphically showing that, for all campuses, there has been a recent slight increase in the one-year retention rate among full-time beginners following several years of decline. Among part-time students, IUPUI is the only campus showing a slight recovery in the one-year retention rate. The one-year retention rate among new transfers has held steady among all comparison groups.

Table 1. One Year Retention Rates at Indiana University					
	Entry Semester				
	Fall91	Fall92	Fall93	Fall94	Fall95
Retention Rates					
Full-Time Beginners					
IUPUI	65.0%	58.8%	61.7%	62.0%	62.5%
IU Bloomington	87.3%	86.6%	87.0%	84.7%	85.8%
IU Regional Campuses	66.0%	61.2%	61.5%	59.1%	61.0%
Part-Time Beginners					
IUPUI	52.5%	49.1%	47.4%	44.4%	47.1%
IU Bloomington	61.1%	66.7%	74.1%	64.1%	60.0%
IU Regional Campuses	44.7%	44.1%	43.6%	42.7%	39.2%
Transfers					
IUPUI	60.3%	58.4%	58.5%	58.5%	59.0%
IU Bloomington	81.3%	80.7%	80.4%	80.5%	80.3%
IU Regional Campuses	59.5%	60.0%	55.7%	55.5%	55.8%
Number of Students in Cohort (n)					
Full-Time Beginners					
IUPUI	1536	1506	1369	1322	1706
IU Bloomington	5208	5527	5308	5504	5195
IU Regional Campuses	2890	2910	2865	2937	2818
Part-Time Beginners					
IUPUI	1168	988	896	694	797
IU Bloomington	36	27	27	39	40
IU Regional Campuses	1699	1617	1432	1310	1184
Transfers					
IUPUI	1061	1176	1071	1053	1299
IU Bloomington	710	698	637	635	600
IU Regional Campuses	1334	1424	1276	1289	1293

(Back to [Table of Contents](#), [List of Displays](#))

Figure 1. One Year Retention Rates at IU

(Back to [Table of Contents](#), [List of Displays](#))

The bottom half of Table 1 shows the number of students within each entry cohort. These numbers illustrate that the vast majority of Bloomington beginners start as full-time students whereas only about two-thirds of the IUPUI and regional campus beginners start out as full-time students. This difference in course load distribution belies another important distinguishing characteristic between the campuses. Full-time beginners at IUPUI and the regional campuses are more likely to become part-time students later in their academic careers compared to full-time beginners at Bloomington. For example, among first-time, full-time students who entered IUPUI for the Fall 1989 semester, 63 percent maintained an average full-time load during their tenure at IUPUI, compared to 94 percent of Bloomington's Fall 1989 first-time, full-time students.

The cohort sizes in Table 1 also show that IUPUI accepts far more transfer students than the Bloomington campus and, in Fall 1995, even more than all IU regional campuses combined. This distinction is important because transfer students are not counted within most national comparisons of student retention and graduation rates. This point will be discussed in more detail below.

Point of Departure. As mentioned above, about one-half of all students who drop out from college do so before their second year. Typically, the largest loss occurs among students who complete their first year but do not return for a second year. Table 2 shows the point of departure of IUPUI

freshman non-persisters throughout the first year.

Table 2. Point of Departure for Fall 1995 First-Time Freshmen

	Number of Students	Percent Retained	Number Lost	Percent Lost
Began Fall 95	2,421			
Finished Fall 95	2,321	96%	100	4%
Began Spring 96	1,880	78%	441	18%
Finished Spring 96	1,770	73%	110	5%
Began Fall 96	1,385	57%	385	16%
Finished Fall 96	1,317	54%	68	3%

(Back to [Table of Contents](#), [List of Displays](#))

Overall, 43 percent of this cohort failed to re-enroll for the Fall 1996 semester. That is, the retention rate for full-time and part-time students combined was 57%. The vast majority of the group completed their first semester. Only four percent failed to do so. Eighteen percent of the entering cohort did not return for the Spring 1996 semester and another five percent withdrew during the spring semester. Sixteen percent of the cohort completed the entire first year but did not return the following fall. Thus about one-half of the students lost between the first and second year are gone after one semester.

Group Differences. Table 3 illustrates differences in the one-year retention rate among IUPUI beginners (full- and part-time, combined) by ethnicity, gender and age. These numbers show a disparity in retention rate by ethnic status, a small but consistent gender difference (with women having a higher rate of retention), and a significantly lower retention rate among students who start as first-time freshmen between the ages of 20 and 24 years compared to both older and younger first-time freshmen. The bottom half of the table again indicates the size of each sub-group. It should be noted that these overall differences do not control for differences in, for example, full- or part-time course load or levels of academic preparedness.

Table 3. IUPUI First-Time Freshmen One-Year Retention Rate by Ethnicity and Age					
	Entry Semester				
	Fall91	Fall92	Fall93	Fall94	Fall95
Retention Rates					
Overall	59.6%	54.9%	56.0%	56.0%	57.6%
Ethnicity/Race					
African American	51.3%	45.3%	43.3%	51.2%	46.6%
Other Minorities	68.3%	64.3%	66.7%	59.6%	50.7%
Other	60.3%	55.6%	56.7%	56.3%	59.1%
Gender					
Male	55.9%	51.4%	53.0%	52.9%	54.6%
Female	62.2%	57.5%	58.4%	58.3%	60.0%
Age Group					
Under 20	62.2%	56.2%	57.6%	57.5%	60.0%
20 - 24	48.5%	44.2%	46.5%	45.8%	46.4%
25 +	60.6%	62.2%	58.1%	59.3%	56.2%
Number of Students in Cohort (n)					
Overall	2704	2494	2265	2016	2503
Ethnicity/Race					
African American	279	234	157	172	249
Other Minorities	82	84	66	57	71
Other	2343	2176	2042	1787	2183
Gender					
Male	1123	1053	990	868	1094
Female	1581	1441	1275	1148	1409
Age Group					
Under 20	1782	1693	1661	1499	1847
20 - 24	468	441	325	301	364
25 +	454	360	279	216	292

(Back to [Table of Contents](#), [List of Displays](#))

Table 4 illustrates how strongly academic preparedness and performance characteristics relate to first-year persistence. The first section of this table shows that students whose entry characteristics place them in the [Undergraduate Education Center](#) preparatory program are less likely to persist than other students in UEC or those admitted directly into an academic school. However, this disparity is notably smaller than differences due to percent of remedial courses taken, percent of D, W, or F grades received or first-year grade-point average.

Table 4. IUPUI First-Time Freshmen One-Year Retention Rate by Initial Major Type and Various Performance Characteristics

	Entry Semester				
	Fall91	Fall92	Fall93	Fall94	Fall95
Retention Rates					
Overall	59.6%	54.9%	56.0%	56.0%	57.6%
Initial Major Type					
Direct Admits (1)	68.5%	63.9%	66.7%	67.8%	67.6%
UEC-Regular Program	62.1%	60.2%	59.7%	60.0%	64.6%
UEC-Prep Program	54.8%	49.5%	50.9%	50.1%	51.3%
Percent of Remedial Courses in First Year					
0% - 33%	63.6%	58.1%	60.9%	60.5%	62.9%
33% - 65%	49.2%	48.1%	46.4%	48.4%	48.3%
66% - 100%	38.3%	32.5%	32.2%	28.4%	29.3%
Percent of DWF Grades in First Year					
0% - 33%	79.9%	74.8%	76.6%	75.0%	78.3%
33% - 65%	47.2%	45.8%	44.6%	47.6%	50.9%
66% - 100%	14.5%	11.6%	15.8%	15.9%	18.5%
First Year Grade-Point Average					
No GPA	25.0%	26.8%	17.3%	12.6%	15.3%
0.00 - 0.99	13.8%	10.8%	12.0%	13.7%	17.2%
1.00 - 1.99	51.5%	49.7%	47.0%	49.0%	51.1%
2.00 - 2.99	80.9%	75.7%	76.2%	72.5%	75.7%
3.00 - 4.00	79.2%	74.3%	76.7%	76.9%	77.0%
Ave for Retained	2.51	2.47	2.52	2.58	2.55
Ave for Not Retained	1.37	1.41	1.43	1.50	1.46
Number of Students in Cohort (n)					
Overall	2704	2494	2265	2016	2503
Initial School					
Direct Admits (1)	520	460	403	369	451
UEC-Regular Program	799	648	591	533	630
UEC-Prep Program	1385	1386	1271	1114	1422
Percent of Remedial Courses in First Year (2)					
0% - 33%	2056	1901	1633	1419	1783
33% - 65%	508	476	511	492	588
66% - 100%	133	114	118	102	123
Percent of DWF Grades in First Year					
0% - 33%	1534	1390	1240	1115	1345
33% - 65%	654	592	547	464	544
66% - 100%	509	509	475	434	605
First Year Grade-Point Average					
No GPA	136	112	81	87	98
0.00 - 0.99	480	473	409	359	470
1.00 - 1.99	563	565	502	388	489
2.00 - 2.99	955	844	786	702	799
3.00 - 4.00	563	497	484	477	638
Ave for Retained	1575	1340	1255	1115	1427
Ave for Not Retained	986	1039	926	811	969

(1) Students admitted to a degree-granting school.

(2) Percent of courses taken during the first year that were remedial, which is defined as any English or Math 000 level course, and Educ X150 or X152.

(Back to [Table of Contents](#), [List of Displays](#))

Examining the size of each cohort, shown in the bottom of Table 4, reveals that there are significant numbers of students in the less well prepared and lower performing groups. This is perhaps most notable among students who receive a grade of D, W, or F in at least two-thirds of their first-year courses. Members of this group, which in Fall 1995 comprised just under one-quarter of the entire freshman cohort, have in less than one in five cases returned for their second year. Although there was an increase in the retention rate for this group from 15.9% for Fall 1994 to 18.5% for Fall 1995, the proportion of students falling into this category increased during this time from 21 percent to 24 percent of the total beginners.

Clearly, differences in preparedness for college level courses (as indicated by placement in remedial courses) and differences in course performance (as indicated by GPA and percentage of D,W, or F grades) are more closely related to levels of retention than course load, ethnicity, gender or age. These findings are consistent with the analyses included in the previous edition of *Research Brief* ([The Impact of Academic Support Programs on Student Performance and Persistence](#)) wherein age and ethnicity did not contribute to the prediction of persistence when indicators of preparedness and performance were included.

Group differences in transfer retention rates were found to follow a similar pattern to those exhibited by first-time freshmen. Course performance levels were strongly associated with likelihood of returning. In one notable difference, transfer student retention did not differ across ethnicity/race for the Fall 1995 cohort. The corresponding tables are not included in this report but are available on request from IMIR.

(Back to [Table of Contents](#), [List of Displays](#))

Six-Year Graduation Rates

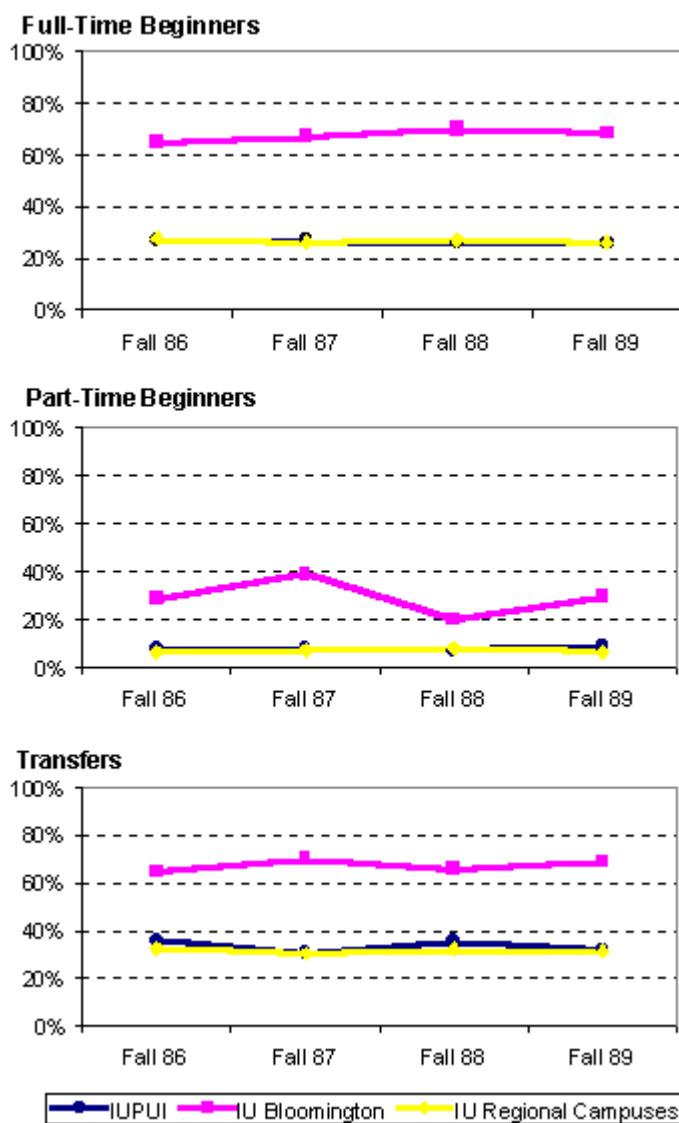
Tables 5 through 7 and Figure 2 provide a parallel analysis of the six-year graduation rate using the same comparisons and group differences considered for the one-year retention rates discussed above.

Comparative Trends. Table 5 and Figure 2 show that IUPUI and the regional IU campuses have similar graduation rate trends, which are well below that of the Bloomington Campus. Furthermore, IUPUI's graduation rate among full-time freshman declined slightly but steadily through the four years shown in the table. Trends for the Bloomington and Regional Campuses exhibit a less consistent pattern during this period. Table 5 includes as a first row the "national" six-year graduation rate for IUPUI. This rate, which is reported to such publications as [U.S. News & World Report](#) is based on the percent of beginners that earn a baccalaureate degree. All other rates reported in the table and used throughout this analysis include students who attain associate degrees and certificates. (Note: Completion time-frame for the associate degree is three years and for a certificate, one and one-half years. That is, any student in the entering cohort who receives an associate degree or certificate within these time frames are considered as part of the degree recipient pool in calculating the graduation rate.)

Table 5. Six Year Graduation Rates at Indiana University

	Entry Semester			
	Fall 86	Fall 87	Fall 88	Fall 89
Graduation Rates				
Full-Time Beginners				
IUPUI National Figures	23.5%	25.3%	24.7%	24.4%
IUPUI	27.1%	26.7%	26.0%	25.8%
IU Bloomington	64.9%	67.2%	70.3%	68.2%
IU Regional Campuses	27.5%	26.0%	27.0%	26.2%
Part-Time Beginners				
IUPUI	7.7%	8.4%	7.4%	8.8%
IU Bloomington	28.6%	38.8%	20.0%	29.4%
IU Regional Campuses	6.4%	7.2%	7.9%	6.4%
Transfers				
IUPUI	36.0%	30.6%	35.6%	32.0%
IU Bloomington	64.5%	69.9%	65.8%	68.7%
IU Regional Campuses	32.4%	30.4%	32.2%	31.5%
Number of Students in Cohort (n)				
Full-Time Beginners				
IUPUI	1012	1071	1378	1658
IU Bloomington	5206	5556	5192	6070
IU Regional Campuses	1877	2285	2425	2790
Part-Time Beginners				
IUPUI	994	1070	1284	1484
IU Bloomington	42	49	30	68
IU Regional Campuses	1212	1355	1491	1666
Transfers				
IUPUI	728	765	869	741
IU Bloomington	921	1004	552	584
IU Regional Campuses	888	1007	953	1035

(Back to [Table of Contents](#), [List of Displays](#))

Figure 2. Six Year Graduation Rates at IU

(Back to [Table of Contents](#), [List of Displays](#))

There is some question as to whether a six-year time frame is adequate for reflecting the degree completion rate for a university at which so many students start out as, or later become, part-time students. For the 1987 cohort, for example, 5% percent of the IUPUI full-time freshmen received a degree between the sixth and ninth years after entry (2.7%, 1.2%, and 0.9% in the 7th, 8th, and 9th years, respectively). The nine-year graduation rate for this cohort is thus 30.1%. Among the Fall 1987 Bloomington entering cohort, an additional 4% received a degree between the sixth and ninth years after entry. Thus, the six-year degree completion rate fails to capture a similar percentage of students at both the traditional and non-traditional campuses. However, since the IUPUI six-year rate is much lower than for Bloomington, this increase represents a more significant change to the overall graduation rate.

Table 5 and Figure 2 also illustrate the extremely low six-year graduation rate among part-time beginners. One might expect the six-year period to be especially inadequate to reflect the time to graduation for part-time students. An additional five percent of the IUPUI 1987 part-time beginners graduate between the seventh and ninth years after entry. While this is not a very large addition, it almost doubles the completion rate from 8% to 13%. In comparison, Bloomington's part-time beginner graduation rate for the Fall 1987 cohort climbed from 39% to 47% between the seventh

and ninth years after entry.

Group Differences. Tables 6 and 7 provide a breakdown of the six-year graduation rate of all IUPUI beginner students (full- and part-time) by the same demographic, enrollment, and performance characteristics considered above with regard to the one-year retention rate. Course performance is more strongly associated with likelihood of graduation in six years than with one-year retention. Most notably, almost none of the students who receive grades of D, W, or F in at least two-thirds of their first year courses graduated during this time frame. And, as noted above, students in this category represent typically one of five students in the entry cohort. Furthermore, the average GPA of the 82% of the cohort that did not graduate in six years is 1.95 compared to 2.85 for the successful degree completers.

Table 6. IUPUI First-Time Freshmen Six Year Graduation Rate by Ethnicity, Gender and Age				
	Entry Semester			
	Fall 86	Fall 87	Fall 88	Fall 89
Graduation Rates				
Overall	17.5%	17.6%	17.0%	17.8%
Ethnicity/Race				
African American	7.9%	6.5%	4.7%	6.7%
Other Minorities	22.4%	30.2%	25.8%	21.2%
Other	18.2%	18.4%	18.1%	18.9%
Gender				
Male	16.1%	14.7%	14.8%	17.2%
Female	18.7%	19.7%	18.8%	18.2%
Age Group				
Under 20	21.1%	21.4%	19.6%	20.6%
20 - 24	9.2%	9.7%	11.4%	13.2%
25 +	10.7%	7.2%	9.1%	8.3%
Number of Students in Cohort (n)				
Overall	2006	2141	2662	3142
Ethnicity/Race				
African American	164	201	256	299
Other Minorities	49	53	66	85
Other	1793	1887	2340	2758
Gender				
Male	929	920	1188	1380
Female	1077	1221	1474	1762
Age Group				
Under 20	1362	1512	1924	2220
20 - 24	327	310	376	501
25 +	317	319	362	421

(Back to [Table of Contents](#), [List of Displays](#))

The relationship between first-year remedial course requirements and graduation rate is also notably strong. Very few students for whom remedial level courses represented more than one-third of their first-year course load graduated within six years.

IUPUI's low graduation rate is not attributable entirely to students who don't perform well. Table 7 shows that the six-year graduation rate is only about 36% among students with an average GPA exceeding 3.00. The low rate among better performing students may be understood by noting the association between student age at entry and graduation. Older students are more likely to enroll part-time and to have even greater concurrent work and family commitments than their younger

counterparts.

Table 7. IUPUI First-Time Freshmen Six Year Graduation Rate by Initial Major Type and Various Performance Characteristics

	Entry Semester			
	Fall 86	Fall 87	Fall 88	Fall 89
Graduation Rates				
Overall	17.5%	17.6%	17.0%	17.8%
Initial Major Type				
Direct Admits ¹	27.4%	25.5%	28.9%	28.2%
UEC-Regular Program	19.1%	21.6%	21.0%	23.5%
UEC-Prep Program	9.8%	10.9%	9.9%	10.3%
Percent of Remedial Courses in First Year				
0% - 33%	19.5%	19.2%	19.6%	21.0%
33% - 65%	2.7%	0.8%	3.8%	4.8%
66% - 100%	0.0%	0.0%	2.5%	0.9%
Percent of DWF Grades in First Year				
0% - 33%	26.2%	26.6%	25.8%	26.6%
33% - 65%	5.6%	5.0%	3.7%	5.7%
66% - 100%	0.0%	0.3%	0.7%	0.4%
First Year Grade-Point Average				
No GPA	0.0%	1.2%	0.0%	0.8%
0.00 - 0.99	0.0%	0.0%	0.3%	0.4%
1.00 - 1.99	5.9%	5.6%	4.4%	6.4%
2.00 - 2.99	23.4%	22.7%	22.3%	23.2%
3.00 - 4.00	32.5%	34.5%	35.9%	36.3%
Ave for Retained	2.85	2.84	2.89	2.85
Ave for Not Retained	2.03	2.01	1.99	1.95
Number of Students in Cohort (n)				
Overall	2006	2141	2662	3142
Initial School				
Direct Admits ¹	391	400	457	574
UEC-Regular Program	922	781	930	996
UEC-Prep Program	693	960	1275	1572
Percent of Remedial Courses in First Year²				
0% - 33%	1782	1945	2244	2543
33% - 65%	149	129	315	455
66% - 100%	64	56	79	116
Percent of DWF Grades in First Year				
0% - 33%	1250	1315	1660	1948
33% - 65%	411	481	564	663
66% - 100%	334	334	414	503
First Year Grade-Point Average				
No GPA	97	82	113	130
0.00 - 0.99	277	285	384	469
1.00 - 1.99	405	467	570	687
2.00 - 2.99	749	841	1005	1170
3.00 - 4.00	467	455	566	658
Ave for Retained	351	374	453	557
Ave for Not Retained	1547	1674	2072	2427

¹ Students admitted to a degree-granting school.² Percent of courses taken during the first year that were remedial, which is defined as any English or Math 000 level course, and Educ X150 or X152

It is important to note that six-year graduation rates reflect the performance of students who entered the institution at least eight years ago. Many of the programs devised to increase retention were not in place for these students, most of whom left after only a year or two. However, since the one-year retention rate at IUPUI decreased through the mid-1990s, there is little likelihood that the six-year graduation rate will increase any time soon. The six-year graduation rate for the Fall 1995 cohort will not be available until the year 2002.

(Back to [Table of Contents](#), [List of Displays](#))

National Comparisons

Table 8 summarizes the results of a national survey of six-year graduation rates among the Fall 1989 cohort of baccalaureate degree seeking students conducted by the [American Association of State Colleges and Universities \(AASCU\)](#) in conjunction with the [Sallie Mae Corporation](#). The survey group included 290 AASCU institutions, including IUPUI. The table reports the graduation rates among beginner students by gender and ethnicity as well as overall for the cohort of new transfer students. The first column shows the rates for IUPUI, followed by rates for a peer group comprised of other large, urban state colleges and universities (Note: Large institutions were defined as those enrolling more than 12,000 students, based on Fall 1994 enrollment; urban institutions were determined using the [U.S. Bureau of Census](#) Beale Codes for Standard Metropolitan Statistical Areas (SMSA)) and for all survey respondents.

Table 8. National Graduation Rate Comparisons from the AASCU/Sallie Mae Survey

	IUPUI	IUPUI's Peer Group	All AASCU
Overall	23.9%	37.5%	42.5%
Gender			
Male	23.2%	32.9%	37.8%
Female	24.5%	41.4%	45.0%
Ethnicity			
Foreign (Non-Res Alien)	42.9%	39.0%	35.2%
African Amer, Non-Hispanic	10.1%	29.0%	30.0%
Amer Indian/Alskn Native	28.6%	26.3%	28.0%
Asian/Pacific Islander	30.0%	41.0%	39.6%
Hispanic	26.7%	27.5%	28.4%
White, Non-Hispanic	25.0%	39.6%	44.8%
Unknown	14.3%	33.0%	34.3%
Transfer Students			
Transfers	49.4%	46.1%	50.0%

(Back to [Table of Contents](#), [List of Displays](#))

Although large urban institutions generally have lower graduation rates compared to the total sample, IUPUI is notably lower still than the urban peers. However, a difference in the six-year graduation rate between men and women is not apparent for IUPUI, as it is for both the peer and total respondent group. Graduation rate differences between African American and white IUPUI students follow the pattern of differences among the comparison groups, but the graduation rates among other minority groups at IUPUI are relatively favorable considering our lower overall rates.

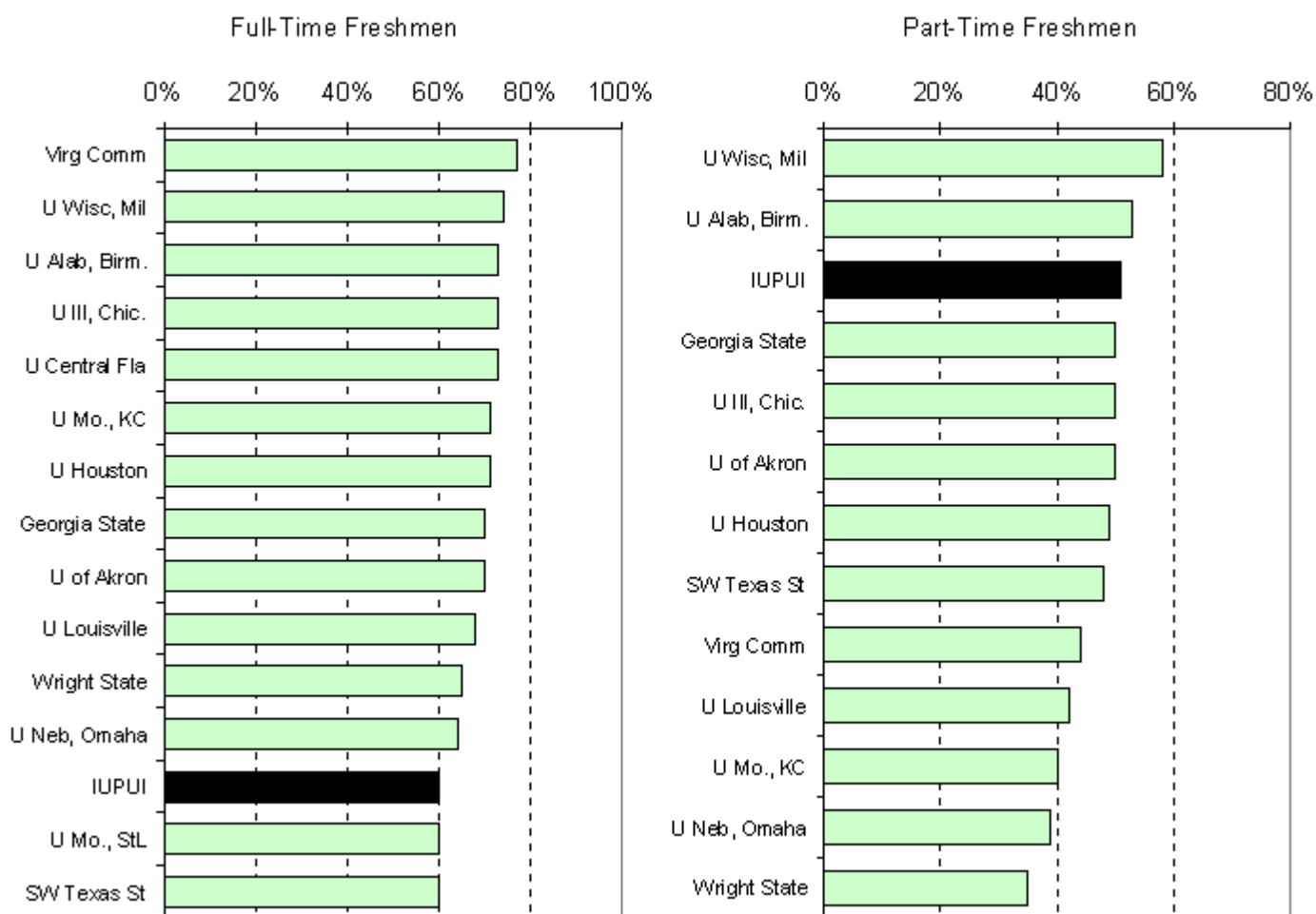
On a positive note, IUPUI compares favorably to its peer group and is at the average rate among all respondents in the graduation rate among new transfer students. The large number of students who transfer to IUPUI further accentuates this finding. Unfortunately, little attention is paid

nationally to transfer student retention and graduation rates.

IUPUI participates in a data exchange with a group of 16 other Urban Public Universities that includes a comparative retention analysis. Figures 3 and 4 compare the retention and graduation rates among the large urban institutions that participate in the data exchange.

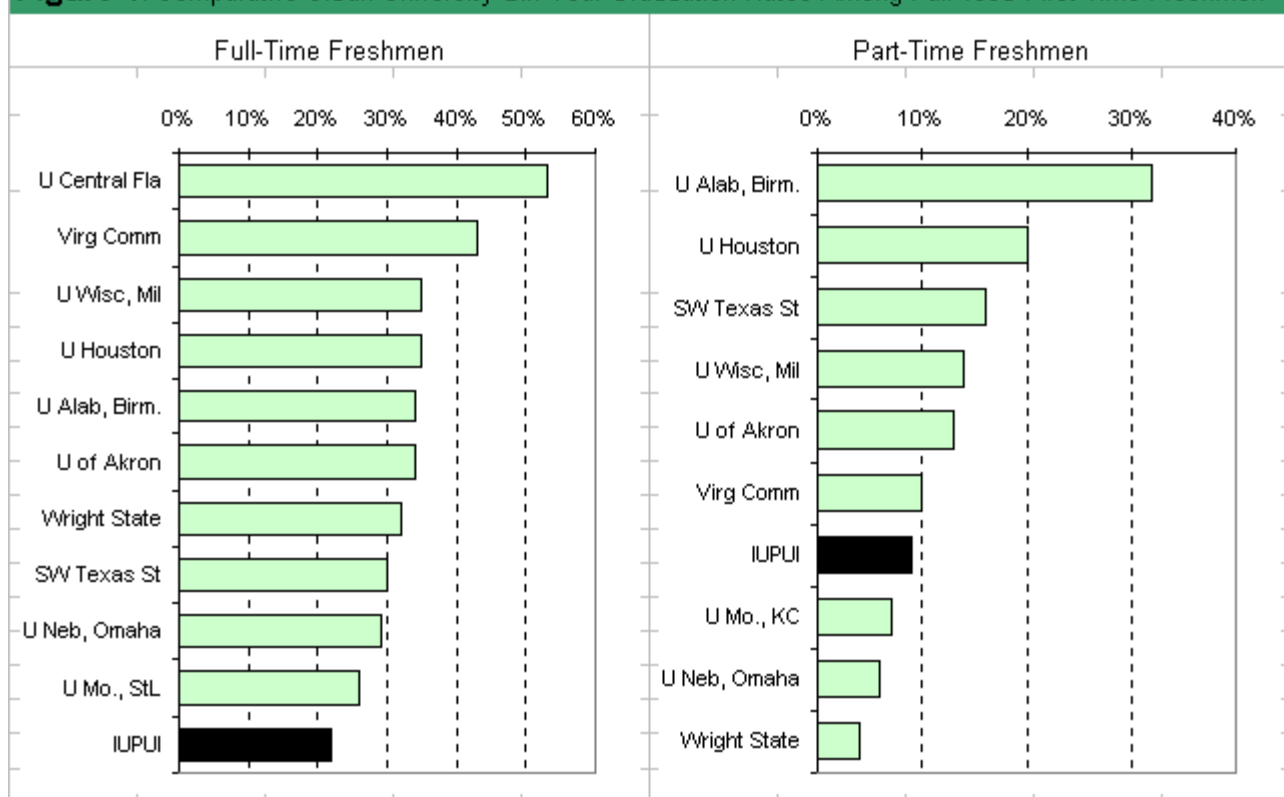
Figure 3 shows that IUPUI is tied with two other institutions, the [University of Missouri, St. Louis](#), and [South Texas State University](#), for the lowest one-year retention rate for Fall 1994 first-time, full-time freshmen among the 15 institutions that provided this information. However, IUPUI ranks third among these institutions in one-year retention among part-time beginning freshmen.

Figure 3. Comparative Urban University One Year Retention Rates Among Fall 1994 First-Time Freshmen



(Back to [Table of Contents](#), [List of Displays](#))

IUPUI is last among the eleven large urban institutions that provided six-year graduation rate measures for first-time, full-time freshman that entered in Fall 1990, as shown in Figure 4. This figure also shows that IUPUI ranks seventh among the 10 institutions in the six-year graduation rate of part-time freshmen who began in Fall 1990.

Figure 4. Comparative Urban University Six Year Graduation Rates Among Fall 1990 First-Time Freshmen

Both sources of comparative data show that IUPUI has a relatively low freshman retention rate and an especially low freshman graduation rate among large urban (and typically commuter) universities. It should be noted that without exception, the other universities considered in this comparison have local community college systems that enroll students who require significant remedial course work or who are otherwise not well prepared for college study. For example, among the colleges in the Public Urban University Data Exchange, IUPUI has the lowest combined SAT average for its freshman class. For Fall 1996, the average combined SAT score for IUPUI entering freshmen was 925. Only one other participating institution had an average combined SAT score below 1000 (the University of Akron, 988).

(Back to [Table of Contents](#), [List of Displays](#))

Further Limitations of Traditional Retention and Graduation Rates

The Origin of New Students at IUPUI

Most retention and graduation rate studies focus on the progress of first-time, full-time freshman. As shown above, this is the area in which IUPUI compares least favorably. Furthermore, these studies typically ignore students who enroll for the first time in the Spring semester. Table 9 summarizes the mode and semester of entry among all students who enrolled at IUPUI for the first time in the 1995-96 academic year. The traditional cohort of interest--full-time, first-time freshmen--represent just over one-quarter (26.1%) of all new students at IUPUI.

Table 9. Mode and Entry Semester, All New IUPUI Students, 1995-96

	N	% of Total
Fall FT Beginners	1708	26.2%
Fall PT Beginners	800	12.3%
Spring FT Beginners	281	4.3%
Spring PT Beginners	439	6.7%
Fall & Spring Transfers	2069	31.7%
Fall & Spring Inter-Campus	1220	18.7%
Total New Students	6517	100.0%

The total number of new students in Table 9 includes over 1,200 students (18.7%) who transferred to IUPUI from another IU campus. In most reports issued within Indiana University, these students are not considered as new but rather are tracked as continuing from their initial campus and credited to those institutions for retention and graduation rate purposes. These data show that the common focus of retention and graduation rate comparisons represent only a minority of students who begin their IUPUI college experience in a given year. Furthermore, this minority represents the 'highest risk' population at IUPUI, a majority of whom do not have the credentials to enter most other college or university in Indiana.

(Back to [Table of Contents](#), [List of Displays](#))

"Stopping Out"

Assessing success in attaining a degree in a six-year time period is limiting given the large number of students who either start as part-time students or reduce their course load as they progress through IUPUI. In addition, many students take one or more semesters off from college to attend to work, family, or other commitments. Table 10 shows the percent of students who return to IUPUI, Bloomington, and the regional campuses after an absence of at least one semester. These "stopout" rates are shown according to the point at which the student initially leaves. In order to control for time between leaving and returning, the rates in Table 10 are based on tracking for seven semesters after the point of departure. In other words, Fall 1990 beginners leaving after one semester were tracked until Fall 1994, those leaving after two semesters were tracked until Spring 1995, and so on.

Table 10. Likelihood of Returning According to Point of Departure

Point of Departure	IUPUI		IU, Bloomington		IU Reg. Campuses	
	N	% Returned*	N	% Returned*	N	% Returned*
After 1st Semester	554	32%	212	34%	1002	29%
After 2nd Semester	627	33%	494	27%	1020	30%
After 3rd Semester	321	45%	188	45%	420	42%
After 4th Semester	222	42%	293	41%	379	36%
After 5th Semester	143	44%	149	62%	218	41%

*Re-enrolled at any IU campus within seven semesters

The percent of students who return after taking time off is similar across campuses. About one-third of students who leave after one or two semesters eventually return. The stopout rate increases to about 45% after the first two semesters. The first-year stopout rate is slightly lower among the regional campuses compared to both IUPUI and Bloomington. Furthermore, the rate of return for Bloomington increases significantly for students who take time off after the fifth semester.

(Back to [Table of Contents](#), [List of Displays](#))

Important Correlates of Retention and Graduation

Retention into a Major

The majority of IUPUI first-time freshmen enter into one of the programs of the Undergraduate Education Center. In order to attain a degree these students must first be admitted to a degree-granting school. Table 11 illustrates the dependence between making this move into a school and ultimately receiving a degree. Specifically, the table portrays the percentage of students entering into a UEC program who either receive a degree within six years, move into a degree-granting program (i.e., a major) but fail to complete a degree, or never move into a degree-granting program.

Table 11. Percent of Students Persisting Into and Through a Major

	Entry Semester			
	Fall 86	Fall 87	Fall 88	Fall 89
Entering Cohort	2029	2177	2649	2981
Graduated within Six Years	18%	18%	17%	16%
Retained to Major	31%	32%	31%	30%
Not Retained to Major	51%	50%	52%	54%

*Includes units merged into the current structure (e.g. UAC, GSP, UDIV)

About one-half of UEC beginners matriculated into a degree-granting program, the first step toward attaining a degree. This proportion increased slightly over the latter part of the trend period. Among those who did attain major-status, one-third went on to complete a degree within six years of entry (including both full-time and part-time students). Thus, while it is essential that students move from the UEC into a degree program, this step does not guarantee a high likelihood of graduation.

(Back to [Table of Contents](#), [List of Displays](#))

Course Performance

The strong association between course performance and retention is not news to the IUPUI community. The D/W/F rate in first-year courses has been tracked closely for years and is used to identify intervention strategies for improving the overall retention rate. Toward that end, we have typically looked at courses with the highest overall D/W/F rates. Table 12 lists the 23 courses with D/W/F rates exceeding 40 percent among courses having more than 50 students enrolled (in all sections combined) for the Fall 1995 and Spring 1996 semesters combined. Not surprisingly, several lower-division math and science courses top the list. The table also includes a column showing the rate of retention to Fall 1996 of the students enrolled in each course. One can see from this table that courses with high D/W/F rates that are typically taken beyond the freshmen year (e.g., Math 154, Econ E270, and Phys P201) have relatively high retention rates.

Table 12. Courses with Highest DWF Rates, Fall 1995 and Spring 1996 Combined

Course		Number of Grades	DWF Rate	Persistence Rate*
MATH	153	1153	59%	66%
MATH	151	276	54%	68%
MATH	154	513	53%	76%
BIOL	N261	788	53%	72%
CHEM	C111	104	51%	74%
BIOL	K101	262	50%	64%
ECON	E270	381	49%	83%
PHYS	P201	132	48%	79%
CHEM	C105	352	47%	75%
CHEM	C106	194	47%	76%
COAS	S200	296	46%	53%
MATH	163	320	45%	76%
EDUC	X150	379	45%	47%
REL	R111	93	44%	68%
ENG	W132	790	44%	71%
GEOG	G130	94	44%	64%
CPT	265	106	42%	75%
PSY	B344	136	42%	80%
MATH	001	3245	41%	58%
BIOL	N107	195	41%	75%
FREN	F117	132	40%	71%
SPEA	J101	312	40%	71%
PHYS	218	199	40%	76%

Note: Includes only courses with at least 25 total grades.

*Percent of students enrolled Fall 1996 at any IU Campus or received a degree prior to Fall 1996.

(Back to [Table of Contents](#), [List of Displays](#))

Table 13 displays the 21 courses from the original sample for which the enrolled students had retention rates below 65%. This list then focuses on courses having students at the highest risk of dropping out. It is not surprising that this list is dominated by basic skills courses taken by the least well-prepared students.

Table 13. Courses With Lowest Associated Persistence Rates, Fall 1995 and Spring 1996 Combined

Course		Number of Grades	DWF Rate	Persistence Rate*
EDUC	X150	379	45%	47%
MATH	M010	1087	35%	53%
COAS	S200	296	46%	53%
EDUC	X152	502	37%	55%
EDUC	X151	1451	33%	57%
MATH	001	3245	41%	58%
ART	117	117	38%	59%
EET	102	62	27%	60%
EDUA	F400	168	22%	60%
ENG	W001	1635	29%	60%
CPT	135	152	19%	61%
HPER	E111	101	22%	62%
HPER	E270	81	11%	63%
MUS	M393	71	23%	63%
HPER	E150	134	27%	63%
MUS	M110	182	23%	64%
BIOL	K101	262	50%	64%
GEOG	G130	94	44%	64%
PSY	B104	2579	36%	64%
EET	114	76	36%	64%

*Percent of students enrolled Fall 1996 at any IU Campus or received a degree prior to Fall 1996.

Notes: Includes only courses with at least 25 total grades.

Courses in bold are also found in the **Table 12**.

(Back to [Table of Contents](#), [List of Displays](#))

Table 14 presents yet another perspective for examining the relationship between D/W/F grades and student retention. Listed in this table are the 25 courses with a difference of 40 percentage points between the D/W/F rates of persisting and non-persisting students (as defined by students' Fall 1996 enrollment status). In other words, student success in these courses is more closely related to persistence than for other courses that may have higher overall D/W/F rates. Only six of these 25 courses (the emboldened ones) are found on the list of courses with highest D/W/F rates and only one from among the top 10.

Table 14. Courses with Highest Difference in DWF Rates Between Dropouts and Persisters, Fall 1995 and Spring 1996 Combined

Course		Number of Grades			DWF Rates			
		Overall	Dropouts	Persisters*	Overall	Dropouts	Persisters*	Difference
PSY	B211	154	25	129	0.31	88%	19%	69%
GEOG	G130	94	34	60	0.44	82%	22%	61%
HER	D102	113	26	87	0.23	69%	9%	60%
EET	114	76	27	49	0.36	70%	16%	54%
RHI	100	84	26	58	0.25	62%	9%	53%
MUS	M393	71	26	45	0.23	54%	4%	49%
HER	H101	166	42	124	0.27	62%	15%	47%
COAS	S200	296	140	156	0.46	69%	24%	45%
HIST	H108	161	31	130	0.19	55%	11%	44%
SPEA	V170	283	86	197	0.28	58%	14%	44%
CMLT	C190	156	51	105	0.31	61%	17%	44%
HER	C111	133	42	91	0.18	48%	4%	43%
MATH	130	215	42	173	0.34	69%	26%	43%
CSCI	207	288	61	227	0.22	54%	13%	41%
CHEM	C111	104	27	77	0.51	81%	40%	41%
GEOL	G107	370	83	287	0.26	58%	17%	41%
CLAS	C205	163	35	128	0.25	57%	16%	41%
SPEA	J101	312	90	222	0.40	69%	28%	41%
MUS	Z201	107	25	82	0.29	60%	20%	40%
PSY	B252	607	168	439	0.34	64%	23%	40%
PSY	B105	904	263	641	0.28	57%	16%	40%
EDUC	X152	502	224	278	0.37	59%	19%	40%
BIOL	N107	195	48	147	0.41	71%	31%	40%
PSY	B344	136	27	109	0.42	74%	34%	40%
HPER	H363	177	36	141	0.24	56%	16%	40%

*Enrolled Fall 1996 at any IU Campus or received a degree prior to Fall 1996

Notes. Includes only courses with at least 25 total grades.

Courses in bold are also found in the **Table 12**.

These different views of the relationship between course performance and retention may help guide intervention efforts currently being developed and expanded at IUPUI. Most attention has focused to date on courses with the highest DWF rates (Table 12) and courses within which students at the highest risk for dropping out enroll (Table 13). Further analysis of the courses listed in Table 14 may help uncover other important dimensions of course performance, such as situations in which students register for courses for which they are not yet prepared.

(Back to [Table of Contents](#), [List of Displays](#))

[Continue](#)