



# **Georgia** Institute of **Tech**nology

**Annual First-Time Freshman  
Retention and Graduation Study**

**Office of Institutional Research and Planning**

**Fall 2015**

**Georgia Institute of Technology**  
**Institutional Research and Planning**  
**Annual First-Time Freshman Retention and Graduation Study**

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Every year, the Office of Institutional Research and Planning examines the retention and graduation outcomes of first-time, full-time freshmen who began their academic career at Georgia Tech in the Summer or Fall terms. These students are grouped into Fall cohorts and tracked over time. This report provides information on retention and graduation rates of first-time, full-time (FTFT) freshmen over time based on a variety of student characteristics.

### **Executive Summary**

The Fall 2014 cohort recorded record high retention rates and six-year graduation rates for the institute. Much of this improvement over time is seen as a result of increasing performance in four areas. First, the observed high performance of women has produced gains to student success metrics as a result of the increasing representation of women in the undergraduate class. Second, there is a steady improvement in graduation rates for underrepresented minority populations over time. Third, there are improvements to retention and graduation outcomes for domestic, out-of-state students. Finally, the continued competitiveness in admissions yields a high quality freshman class that thrives at Georgia Tech, resulting in gains to retention and graduation rates.

### **Findings**

- A record high 97% of FTFT Freshmen from the Fall 2014 cohort were retained for Fall 2015.
- 39% of FTFT Freshmen from the Fall 2011 cohort graduated within four years as of Summer 2015.
- A record high 85% of FTFT Freshmen from the Fall 2009 cohort graduated within six years as of Summer 2015.
- Women continue to outperform men for all outcomes measures.
  - Females have a retention rate that is 0.3% higher than males.
  - Females have a four-year graduation rate of 46% as compared to 35% for males.
  - Females have a six-year graduation rate of 89% as compared to 82% for males.
- Underrepresented minorities have seen improvements to retention and graduation rates over time.
  - Since the Fall 2006 cohort, underrepresented minority retention has improved by five percentage points, from 91% to 96%.
    - Black or African American retention rates have improved from 89% for the Fall 2006 cohort to 96% for Fall 2014.
  - Underrepresented minority four-year graduation rates rose from 21% for the Fall 2005 cohort to 34% for the Fall 2011 cohort.
    - Black or African American four-year graduation rates nearly doubled, from 15% for the Fall 2005 cohort to 27% in Fall 2011.
    - Hispanic or Latino four-year graduation rates rose by ten percentage points, from 31% for the Fall 2005 cohort to 41% by Fall 2011.
  - Underrepresented minority six-year graduation rates rose from 69% for the Fall 2005 cohort to 81% for the Fall 2009 cohort.
    - Black or African American six-year graduation rates rose by almost 18 percentage points, from 60% for the Fall 2005 cohort to 78% in Fall 2009.
    - Hispanic or Latino six-year graduation rates rose by six percentage points, from 79% for the Fall 2005 cohort to 85% by Fall 2009.

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- Residency has seen great variation over time, with international students falling from top retention and six-year graduation rates to trailing their domestic peers.
  - Retention rates for international students fell from an institute high 95% for the Fall 2004 cohort to a low of 89% for the Fall 2009 cohort. They now trail their in-state (97%) and domestic out-of-state (96%) peers for the Fall 2014 cohort at 94%.
  - Four-year graduation rates have continued to see international students outpace their peers, at 52% for the Fall 2014 cohort as compared to 38% for both in-state and out-of-state students.
  - Six-year graduation rates mirror the pattern of retention rates, with international students falling from an institute high of 88% for the Fall 2004 cohort to an institute low of 80% for the Fall 2009 cohort. In-state students lead six-year graduation rates at 87% trailed by domestic out-of-state students at 82%.

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**Definitions**

Cohorts are based on the first term of entry for either Summer or Fall terms for first-time students enrolled full-time. Both of these terms are collapsed to a single Fall cohort. For example, a student beginning at Georgia Tech in Summer 2014 would be considered to be part of the Fall 2014 cohort along with all colleagues that began in the Fall. In accordance with the U.S. Department of Education guidelines, the cohort may be adjusted based on the death, permanent disability, religious, government, or military service of a student. This exclusion rule permits the removal of these students from the cohort and subsequent calculations.

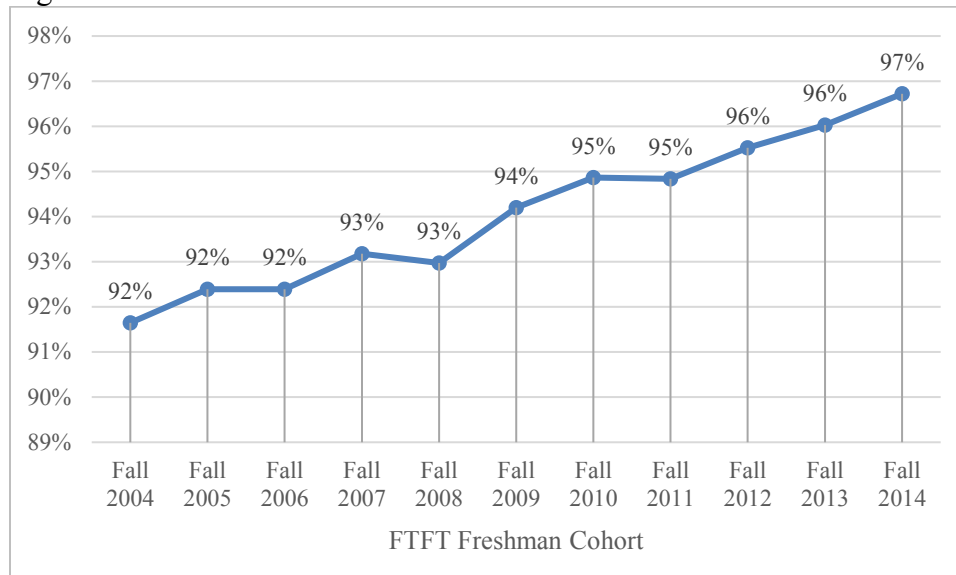
Retention is defined as being enrolled or having graduated in each successive Fall term. For example, a student in the Fall 2013 cohort who is enrolled for Fall 2014 would be counted as being retained. Similarly, a student from the Fall 2010 cohort who graduated in Spring 2014 would be counted as retained for Fall 2014. Using this definition, it is possible for students to not be retained during one term but retained in a later term if they stopout for a period of time.

The definition for graduation is a function of time-to-degree based on the first term of enrollment and the graduation term. A student from the Fall 2010 cohort who graduated in Summer 2014 would be counted as having graduated within four years. The student would also be considered to have graduated within five years, six years, or any higher measure of time since the degree was completed faster than the cutoff. However, if a student began in Fall 2010 and graduated in Fall 2014, the student would not be included in the four-year graduation rate but would be counted for graduating within five years.

**Retention**

The retention rate from first year to second year reached a new high for the Fall 2014 cohort with roughly 97% of full-time, first-time freshmen returning in Fall 2015. This is a large improvement from Fall 2004, when 92% of students returned for their second year. It should also be noted that the Fall 2014 cohort was 230 students larger than the Fall 2004 cohort. The increase in the number of students could easily have been accompanied by lower retention rates. Instead, strong improvements in retention rates were observed, suggesting gains despite the larger total number of freshmen in the class.

Figure 1. FTFT Freshman Retention Rate



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Table 1. First-Time, Full-Time Freshman Retention Rates

COHORT	N	1st YR	2nd YR	3rd YR	4th YR	5th YR	6th YR	7th YR	8th YR	9th YR	10th YR
Fall 2004	2,575	92%	86%	84%	83%	82%	83%	83%	83%	83%	83%
Fall 2005	2,419	92%	87%	84%	83%	82%	82%	82%	82%	82%	82%
Fall 2006	2,838	92%	87%	84%	83%	82%	82%	82%	82%	82%	
Fall 2007	2,624	93%	88%	87%	85%	85%	85%	85%	85%		
Fall 2008	2,633	93%	88%	86%	85%	84%	84%	85%			
Fall 2009	2,655	94%	90%	88%	88%	88%	88%				
Fall 2010	2,706	95%	92%	90%	89%	89%					
Fall 2011	2,692	95%	91%	89%	89%						
Fall 2012	3,039	96%	92%	90%							
Fall 2013	2,669	96%	94%								
Fall 2014	2,805	97%									
Fall 2015	3,087										

Note: Retention is defined as enrollment in the subsequent Fall term.

While retention rates for the full freshman cohort have improved dramatically over time, there may be different patterns based on a variety of student characteristics. For example, it could be hypothesized that students from the state of Georgia have a higher retention rate than their out-of-state or international peers. To test for these differences, additional comparisons of retention rates were made based on student demographics and academics.

**Student Demographics**

Table 2 details the retention rates of different types of students based on their demographic characteristics.

Table 2. FTFT Freshman Retention Rates by Demographics

	Fall 2004		Fall 2009		Fall 2014	
	N	1st YR	N	1st YR	N	1st YR
Total	2,575	92%	2,655	94%	2,805	97%
<i>Race/Ethnicity</i>						
Asian	459	94%	767	94%	756	97%
Black or African American	149	94%	120	95%	160	96%
Hispanic or Latino	110	95%	110	93%	212	96%
Other	*	*	*	*	*	*
Two or More Races	45	93%	54	94%	115	99%
Unknown	*	*	29	93%	116	97%
White	1,796	91%	1,568	95%	1,443	97%
<i>Underrepresented Minority</i>						
International	103	95%	306	89%	251	94%
Non-URM	2,208	91%	2,107	95%	2,112	97%
URM	264	94%	242	93%	442	96%
<i>Residency</i>						
In-State	1,572	94%	1,605	96%	1,483	97%
International	103	95%	306	89%	251	94%
Out-of-State	900	88%	744	93%	1,071	96%
<i>Gender</i>						
Female	768	94%	887	95%	1,076	97%
Male	1,807	91%	1,768	94%	1,729	97%
<i>Pell Recipient</i>						
Pell Recipient	310	92%	378	91%	357	95%
Non-Pell Recipient	2,265	92%	2,277	95%	2,448	97%
* Redacted in accordance with FERPA policies.						

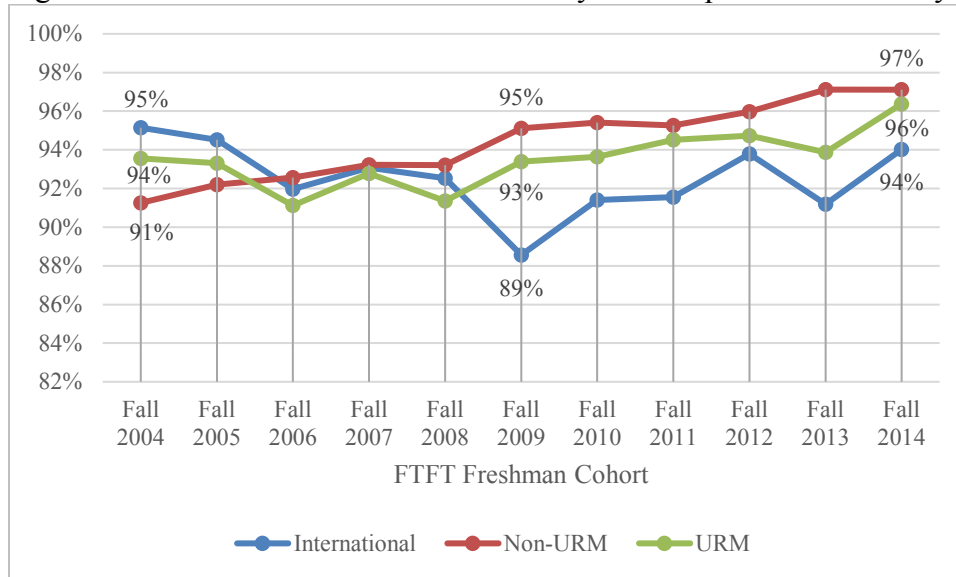
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For race and ethnicity, a positive pattern is observed over time for every racial and ethnic group. Some groups have more variation than others from year to year, but this is likely due to smaller headcounts which can cause the rates to vary based on the performance of a handful of individuals. As of Fall 2014, students reporting Two or More Races had the highest retention rate at 99%. All groups exceeded 96%, thus showing little variation in overall retention rates by race or ethnicity.

When looking at underrepresented minorities (URM), students were grouped based on the combination of their self-reported racial and ethnic identities. White and Asian students are considered non-minority groups while Black or African American, Hispanic or Latino, American Indian or Alaskan Native, and Native Hawaiian or Other Pacific Islander students are considered underrepresented minorities. For students who have two or more racial or ethnic groups, being White or Asian for any of their listed groups would also mean they are a non-minority. Finally, international students were separated into their own category, similar to the methodology used by the U.S. Department of Education.

The highest retention rates in Fall 2004 were for international students or URM students. However, by Fall 2006, non-URM students recorded retention rates that exceeded these other two groups. Rates for international students continued to decline, hitting a floor of 89% in Fall 2009. Since then, all retention rates have increased, but the order has reversed. Non-URM students in the Fall 2014 cohort observed the highest retention rates (97%) followed by their URM (96%) and international peers (94%).

Figure 2. FTFT Freshman Retention Rates by Underrepresented Minority Status

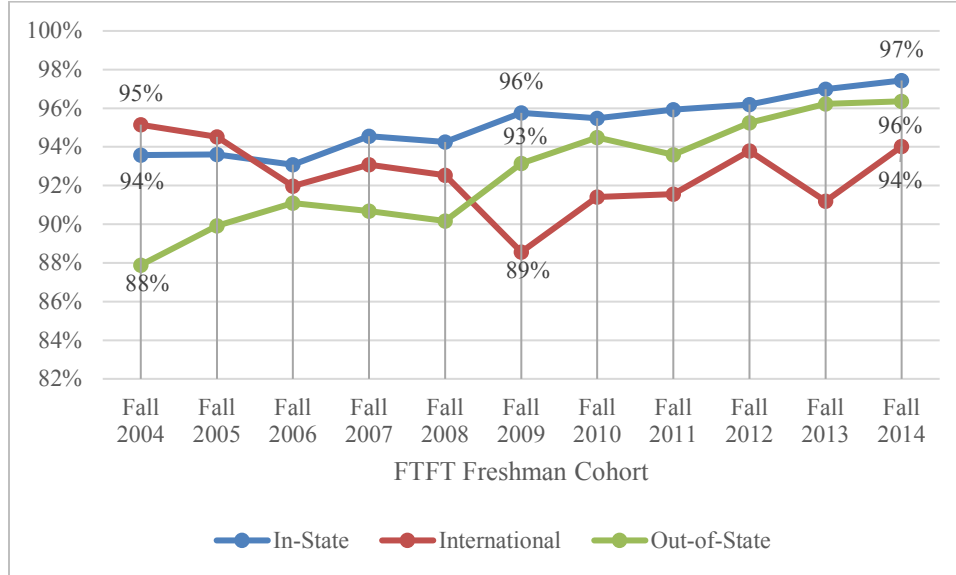


Residency is also of particular interest and follows a pattern similar to underrepresented minorities. Residency for this study is defined by the listed residency of a student during their first term at Georgia Tech. This means that out-of-state or international students who later qualify as Georgia or U.S. residents are not considered to be in-state students for this analysis. International students again had the highest retention rates in Fall 2004 at 95% followed by in-state students at 94%. Out-of-state students trailed significantly, with a Fall 2004 cohort retention rate of 88%. However, out-of-state student retention has increased dramatically over time, now exceeding 96%. In-state students have also seen better retention results while international students continue to see great variation in their outcomes. Indeed, while Fall 2009 was the low point for international students with a retention rate of 89%, the second lowest cohort on record was for Fall 2013 at only 91% while in-state and out-of-state students from this same cohort exceeded 96%.



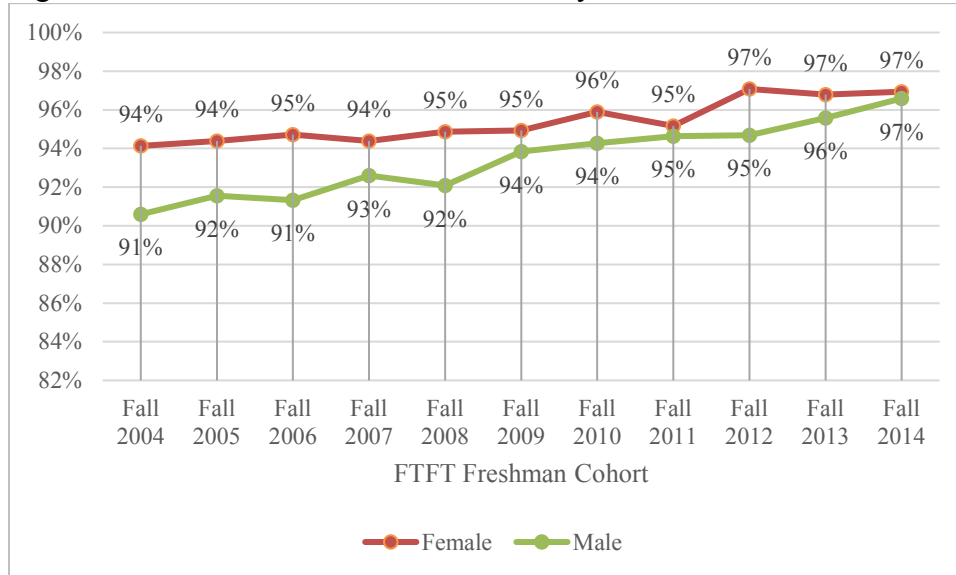
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Figure 3. FTFT Freshman Retention Rates by Freshman Residency



When looking at gender, men have consistently lower retention rates than women. In Figure 4, the green line for men continues to fall below that of women, however, the gap has closed significantly. In Fall 2004, men had a retention rate that was 3.5 percentage points below that of women. However, the Fall 2014 cohort only saw a 0.35 percentage point difference between women and men, a difference that is no longer statistically significant.

Figure 4. FTFT Freshman Retention Rates by Gender

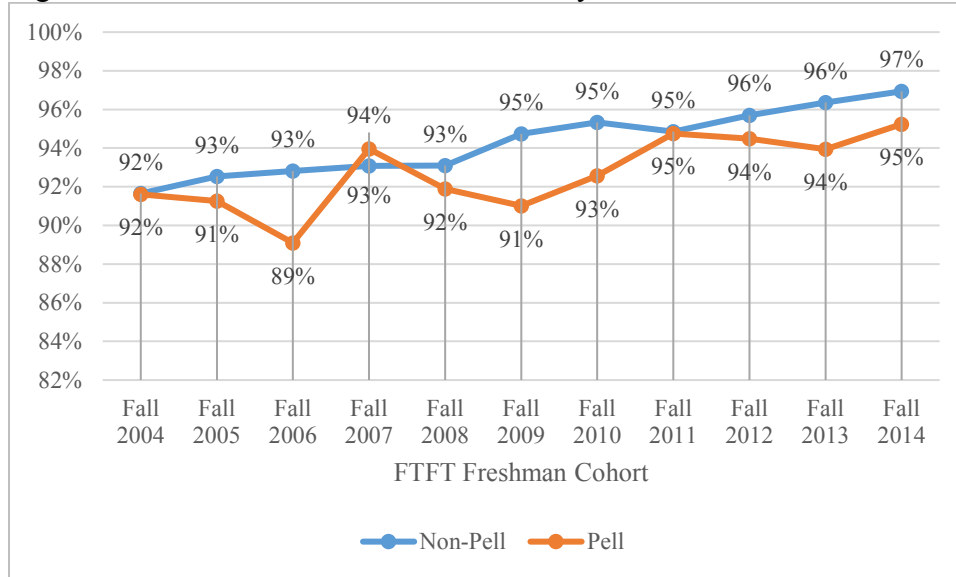


Finally, financial aid can also play a large role in retention. Increasing costs to students may prohibit them from returning in subsequent semesters. By offering different types of financial aid, students may be more likely to stay at Georgia Tech rather than leaving due to cost concerns. In addition, financial aid can serve as a proxy for socioeconomic status of a student. For example, certain programs such as Pell grants are targeted toward students from low-income families. Comparing Pell recipients to non-Pell recipients can help to illustrate differences in retention based on socioeconomic status and the types of aid received. One of the difficult issues in looking at financial aid is that a student may be eligible for different aid packages at different points in their academic career.

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A student may receive a scholarship for a term but lose it the next term. To account for this variation over time, students were classified in groups based on whether they received a Pell award during the Fall term of their Freshman year.

Figure 5. FTFT Freshman Retention Rates by Pell Status



Overall, Pell recipients have followed a similar upward trajectory over the years as compared to their non-Pell recipient peers. Pell recipients, however, have seen greater variation from year to year. Indeed, Pell recipients have retention rates that typically fall a few percentage points below their non-Pell peers. Yet in Fall 2007, those students who were Pell recipients actually retained at a greater rate than non-Pell recipients. This was quite a turnaround from the low retention rate of 89% in the year prior.

**Academics**

The next area of interest was based on the chosen major and college of a student. The major first chosen by a student when enrolled at Georgia Tech was used to examine potential differences in retention based on the first chosen course of study.

Table 3. FTFT Freshman Retention Rates by College of Entry

	Fall 2004		Fall 2009		Fall 2014	
	N	1st YR	N	1st YR	N	1st YR
Total	2,575	92%	2,655	94%	2,805	97%
<i>College</i>						
College of Architecture	178	89%	122	93%	56	98%
College of Computing	185	87%	163	94%	344	96%
College of Engineering	1,658	92%	1,760	94%	1,905	97%
College of Sciences	276	95%	287	94%	230	97%
Ivan Allen College	121	93%	157	92%	111	97%
Scheller College of Business	157	94%	166	96%	159	96%

Overall, there is a positive pattern for every college at Georgia Tech. This suggests that the improvements to retention over time are not concentrated within a single college or discipline, but spread out more broadly across campus. However, there is great variation in retention rates from year to year when looking at the cohorts by college. For example, the College of Sciences had the highest retention rate for the Fall 2004 cohort at 95% but

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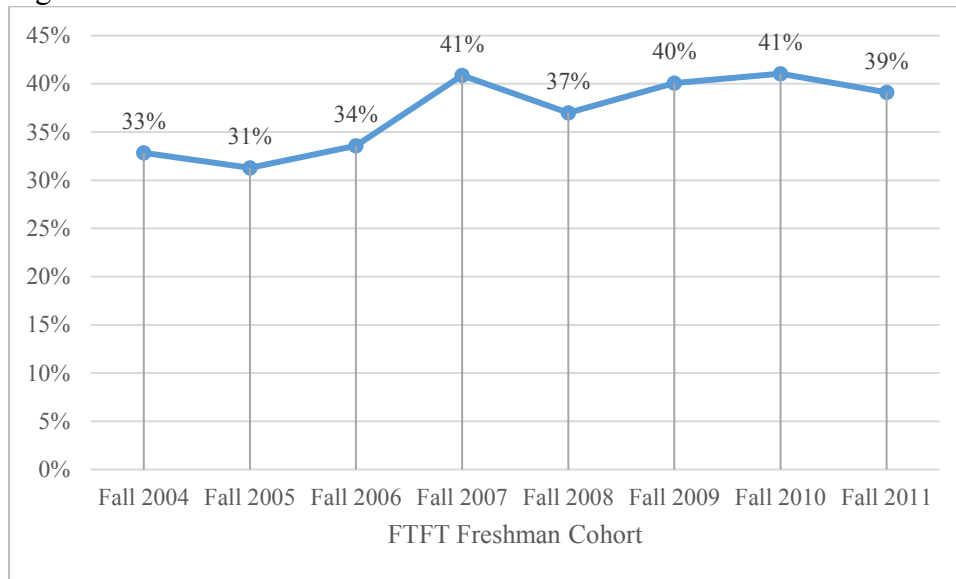
the lowest retention rate for the Fall 2006 cohort at 89%. Similarly, Ivan Allen College saw a one year increase between Fall 2013 to Fall 2014 of six percentage points, from 91% to 97%. Finally, the College of Computing has seen the greatest increase over time, rising from 87% in Fall 2004 to a high of 96% by Fall 2014.

When looking at major, the results get slightly more complicated given the number of majors that students may choose from. Four programs of note stand out. Chemistry, International Affairs and Modern Languages, and Nuclear and Radiological Engineering have all had perfect retention rates for the past two years. The International Affairs major is even stronger, with a perfect 100% retention rate dating back to Fall 2010. The lowest retention rates for the Fall 2014 cohort were in Literature, Media, and Communications (78%), Biochemistry (92%), Computational Media (93%). However, no single major has consistently been among those with the lowest retention rates, suggesting that composition of the freshman cohort may be more likely to influence the retention rate rather than a program or department.

**Graduation Rates**

Another key indicator of student success is time-to-degree. The two primary measures include graduation within four years (considered 100% of normal time for four-year institutions) and graduation within six years (considered 150% of normal time for four-year institutions). At Georgia Tech, the four-year graduation rate has remained relatively stable for cohorts since Fall 2007, when the rate rose from the low thirtieth percentile to just shy of 41%. The most recent cohort, the Fall 2011 cohort, had a four-year graduation rate of 39%. As can be seen in Figure 6, this is slightly down from the prior year's cohort, which had the highest recorded rate of 41%.

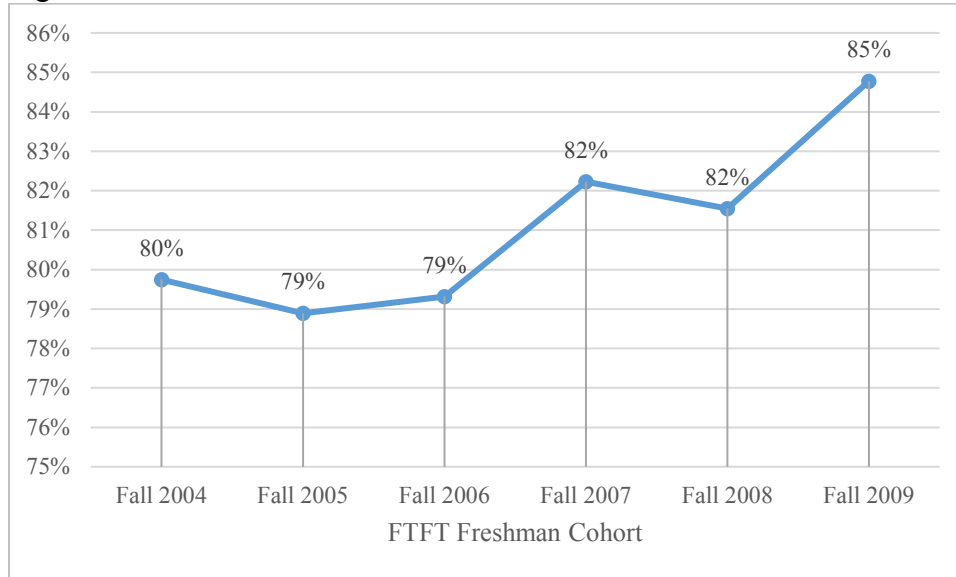
Figure 6. FTFT Freshman Four-Year Graduation Rates



While the four-year graduation rate at Georgia Tech has remained relatively flat since the Fall 2007 cohort, the six-year graduation rate at Georgia Tech has seen a strong increase over time. For the Fall 2005 cohort, the six year graduation rate was 79%. Most recently, the Fall 2009 cohort recorded a record high 85% of first-time, full-time freshmen graduating within six years.

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Figure 7. FTFT Freshman Six-Year Graduation Rates



The impressive six-year graduation rates suggest that many students may take longer than four years to complete their degree due to credit hour requirements, Co-Op participation, internships, study abroad, or the participation in other academic enrichment activities. The 85% graduation rate illustrates that, ultimately, students tend to complete their degree and do so within six years. The full table of graduation rates for the various cohorts can be seen below in Table 4.

Table 4. FTFT Freshman Graduation Rates

<b>COHORT</b>	<b>N</b>	<b>4-YR</b>	<b>5-YR</b>	<b>6-YR</b>	<b>8-YR</b>
Fall 2004	2,572	33%	72%	80%	82%
Fall 2005	2,416	31%	72%	79%	81%
Fall 2006	2,838	34%	72%	79%	82%
Fall 2007	2,622	41%	76%	82%	84%
Fall 2008	2,633	37%	75%	82%	
Fall 2009	2,654	40%	78%	85%	
Fall 2010	2,706	41%	80%		
Fall 2011	2,690	39%			
Fall 2012	3,038				
Fall 2013	2,669				
Fall 2014	2,804				
Fall 2015	3,087				

Note: Graduation is defined as the proportion of the revised cohort who completed their degree within the allocated time.

The revised cohort counts exclude students who died or were totally and permanently disabled, or those who left school to serve in the armed forces, with a foreign aid service, or with a religious mission.

As with the analysis for retention rates, different groups of students were analyzed to examine differences in four-year and six-year graduation rates based on student characteristics pertaining to demographics, academics, and student activities.

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### Student Demographics

The results based on demographics are presented below in Table 5. Unlike retention rates, however, graduation rates demonstrated more differences based on different student types.

Table 5. FTFT Freshman Graduation Rates by Demographics

	Fall 2005			Fall 2007			Fall 2009			Fall 2011		
	N	4-YR	6-YR	N	4-YR	6-YR	N	4-YR	6-YR	N	4-YR	6-YR
Total	2,416	31%	79%	2,622	41%	82%	2,654	40%	85%	2,690	39%	-
<i>Race/Ethnicity</i>												
Asian	375	42%	83%	573	47%	84%	766	49%	87%	644	49%	-
Black or African American	149	15%	60%	118	31%	75%	120	28%	78%	167	27%	-
Hispanic or Latino	112	31%	79%	141	30%	75%	110	38%	85%	176	41%	-
Other	*	*	*	*	*	*	*	*	*	*	*	-
Two or More Races	65	34%	88%	65	48%	80%	54	37%	81%	89	31%	-
Unknown	*	*	*	*	*	*	29	41%	86%	25	32%	-
White	1,701	31%	79%	1,712	40%	83%	1,568	37%	84%	1,584	37%	-
<i>Underrepresented Minority</i>												
International	73	44%	81%	159	48%	81%	305	47%	80%	237	52%	-
Non-URM	2,074	32%	80%	2,202	42%	83%	2,107	40%	86%	2,107	38%	-
URM	269	21%	69%	261	30%	75%	242	31%	81%	346	34%	-
<i>Residency</i>												
In-State	1,531	32%	80%	1,596	42%	85%	1,605	40%	87%	1,642	38%	-
International	73	44%	81%	159	48%	81%	305	47%	80%	237	52%	-
Out-of-State	812	28%	76%	867	38%	78%	744	38%	82%	811	38%	-
<i>Gender</i>												
Female	713	46%	84%	854	50%	86%	887	48%	89%	1,015	46%	-
Male	1,703	25%	77%	1,768	36%	80%	1,767	36%	82%	1,675	35%	-
<i>Pell Recipient</i>												
Non-Pell Recipient	2,153	32%	80%	2,325	41%	83%	2,276	41%	86%	2,232	41%	-
Pell Recipient	263	26%	72%	297	38%	78%	378	34%	80%	458	31%	-

\* Redacted in accordance with FERPA policies.

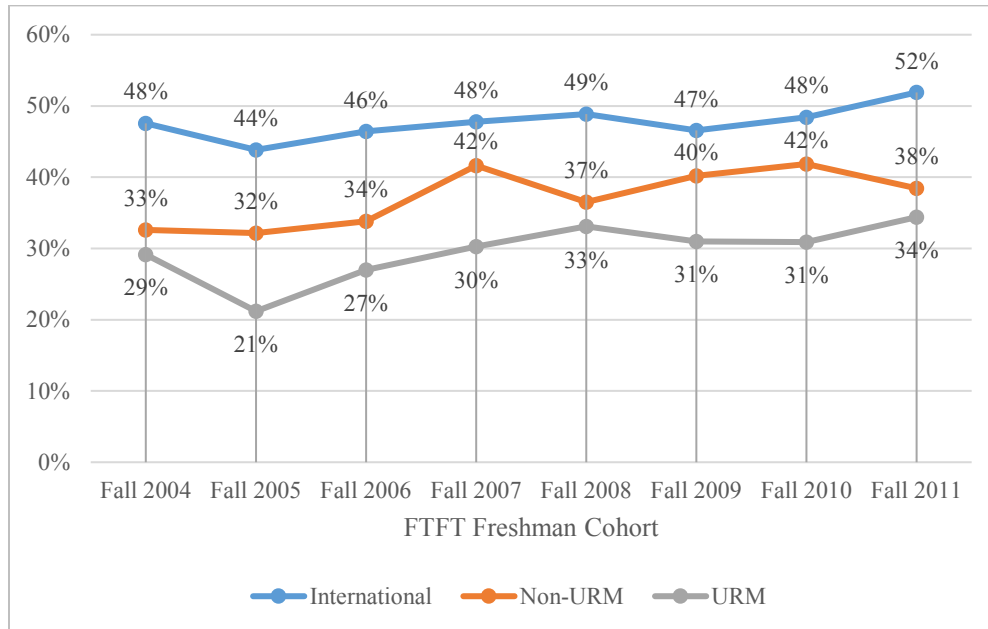
Asian students have consistently had the highest four-year graduation rates, reaching 49% for the most recent cohort of students who began in Fall 2011. Hispanic or Latino students currently have the second highest graduation rate of 41%, but have seen greater variation over time. In fact, Hispanic or Latino students from the Fall 2008 cohort actually had the lowest graduation rate (32%) of any racial or ethnic group from that cohort. Black or African American students generally have the lowest graduation rates for any cohort. However, graduation rates tend to fluctuate for racial and ethnic groups from year to year.

Six-year graduation rates show much less variability over time than four-year rates. For most racial and ethnic groups, there has been little change in the rates over time. However, students identifying as Black or African American and Hispanic or Latino have seen improvements in six-year graduation rates in recent years. For Black or African American students, their graduation rates have consistently trailed their peers. The Fall 2005 cohort of Black or African American students had a six-year graduation rate of 60%. By Fall 2009, the rate had improved to 78%. Similarly, Hispanic or Latino students had a low rate of 75% for the Fall 2007 cohort, but recorded one of the highest retention rates at Georgia Tech for the Fall 2009 cohort at 85%. This six-year graduation rate for Hispanic or Latino students exceeds that of White students (84%) and only slightly trails Asian students (87%), a vast improvement in only a few years.

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Once aggregating to underrepresented minority status, the patterns are more clear. Figure 8 demonstrates that international students consistently have the highest four-year graduation rate followed by non-minority students and underrepresented minorities having the slowest time-to-degree. It should be noted, however, that all groups have seen a general improvement in their graduation rates over time.

Figure 8. FTFT Freshman Four-Year Graduation Rates by Underrepresented Minority Status



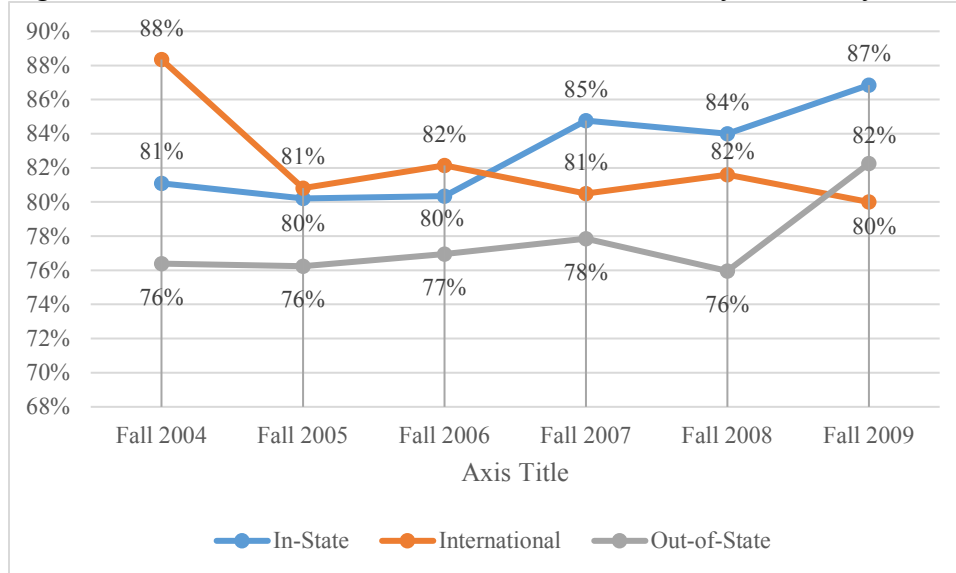
For six-year graduation rates, the Fall 2004 cohort showed high six-year graduation rates for international students and relatively similar rates for URM and non-URM students. However, the next cohort saw a major decline in graduation rates for URM students, from 79% to 69%. Over time, URM students have improved while international student graduation rates have declined. By Fall 2009, the cohort saw URM six-year graduation rates exceed those of international students, at 81% and 80%, respectively. Non-minority students, on the other hand, have continued an upward trajectory over time, posting a six-year graduation rate for the Fall 2009 cohort of 86%.

When looking at residency and graduation rates, international students continue to exceed domestic students, but there is no clear difference in graduation rates between in-state and out-of-state students. Typically, in-state students had four-year graduation rates that slightly exceeded out-of-state students, but the Fall 2011 cohort saw out-of-state four-year graduation rates exceed those of in-state students for the first time. International students from the Fall 2011 cohort had a four-year graduation rate of 52% as compared to 38.1% for out-of-state students and 37.8% for in-state students.

In looking at six-year graduation rates by residency, a similar pattern emerges. International students have a downward trajectory while in-state and out-of-state students have seen improvements. For in-state students, the improvements have been relatively similar from year to year. Out-of-state students, however, remained relatively flat until Fall 2008. Between the Fall 2008 and Fall 2009 cohorts, there was a great improvement in the six-year graduation of out-of-state students, rising from 76% to 82%. This most recent increase pushed out-of-state students over international students in terms of the proportion receiving degrees within six years.

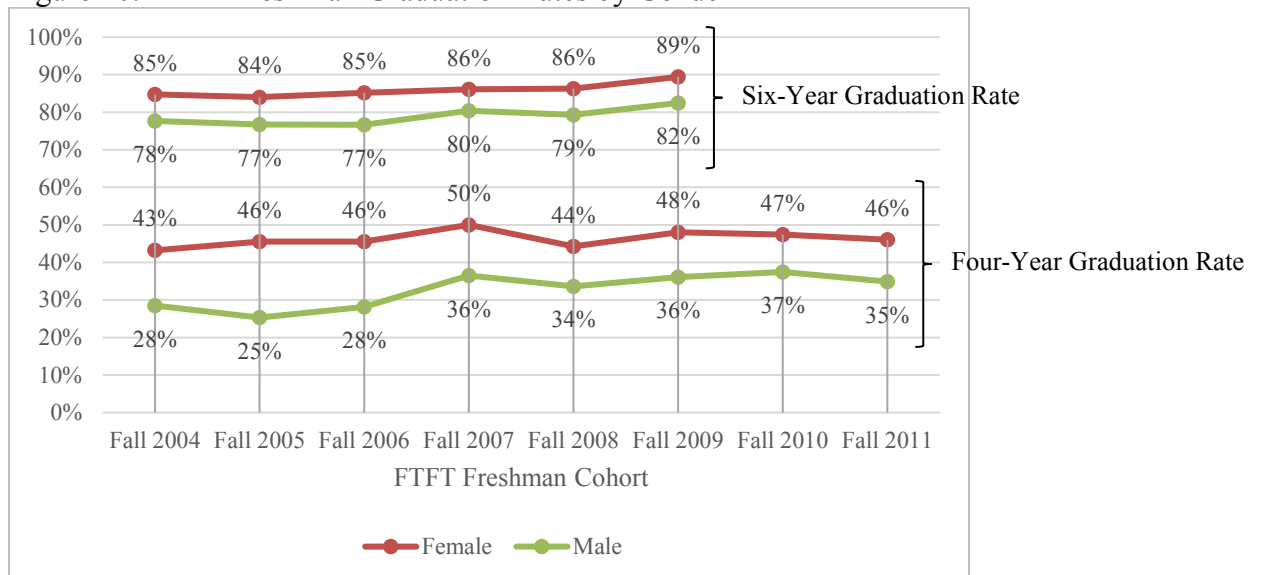
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Figure 9. FTFT Freshman Six-Year Graduation Rates by Residency



The next key demographic is for gender. While retention rates for females only slightly exceeded males, the graduation rates differ by a much larger margin. For women, four-year graduation rates have consistently been ten percentage points or more above those of men. As would be expected with such a wide margin, these differences are all statistically significant. The differential is so large in fact, that the lowest four-year graduation rate for women since the Fall 2004 cohort was 43%. By comparison, the highest four-year graduate rate for men over the past eight years was 37%. However, it should be noted that some of this differential can be captured by the varying choices of males and females in selecting a major and program of study. Certain programs, which tend to be favored by males, tend to take longer to complete.

Figure 10. FTFT Freshman Graduation Rates by Gender

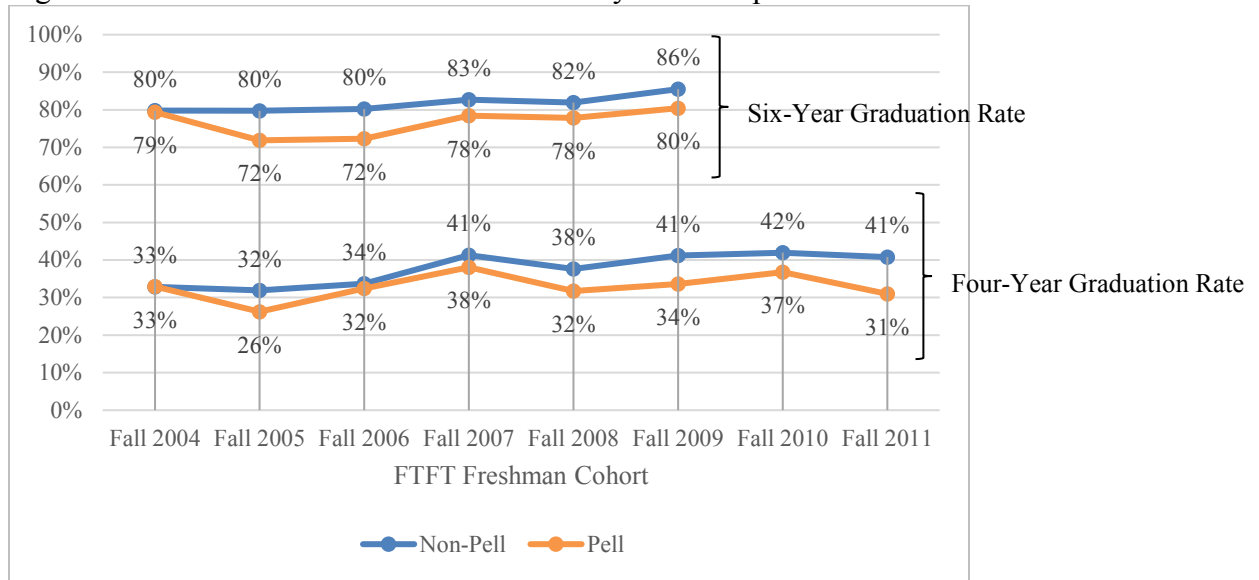


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Six-year graduation outcomes by gender continued the pattern observed with other outcomes measures associated with retention and graduation. Namely, that women have consistently exceeded men. Indeed, the six-year graduation rates for women tend to exceed those for men by seven to eight percentage points. This is not as much as the ten-plus point differential seen with the four-year rates, but the differences are still statistically significant in magnitude and tend to be uniform from year to year.

Finally, financial aid can also contribute greatly in the ability to finish a degree on time. However, it should be noted that length of receipt or the loss of aid may impact graduation outcomes. In the analysis that follows, the comparison is only based on the initial receipt of Pell grants during the first Fall term. To begin, non-recipients have generally had four-year graduation rates that were above those who received Pell. Since Fall 2006, the gap between Pell and non-Pell recipients has been steadily increasing, widening to a gap of ten percentage points for the Fall 2011 cohort. From a statistical standpoint, these differences in recipient status have been significantly different since Fall 2009. Since Pell receipt is based on socioeconomic status, changes in financial standing could be impacting the ability to graduate within four years. Similarly, many of these students come from backgrounds with limited resources academically and otherwise, which may have impacted their studies while at Georgia Tech.

Figure 11. FTFT Freshman Graduation Rates by Pell Recipient



Pell recipient status for six-year graduation rates again demonstrates that Pell recipients have lower graduation rates than non-Pell recipients, but the magnitude in recent years is smaller. The Fall 2008 cohort saw a six-year graduation rate for Pell recipients that was four percentage points lower than non-recipients as compared to a four-year rate that showed a six percentage point spread. Similarly, the Fall 2009 cohort had a six point difference in six-year rates, which was slightly smaller than the seven point difference in four-year rates.

**Academics**

The choice of a college, major, or program of study can have a significant impact on the time taken to complete a degree. Certain STEM programs have credit requirements that exceed those of a standard 120 hour, four-year degree. In addition, many students choose to participate in cooperative education (Co-Op) programs or internship programs, taking additional time to get professional experience while studying at Georgia Tech. As such, these additional educational and professional opportunities should be considered in the context of examining four-year graduation rates.



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Table 6. FTFT Freshman Graduation Rates by College of Entry

	Fall 2005			Fall 2007			Fall 2009			Fall 2011		
	N	4-YR	6-YR	N	4-YR	6-YR	N	4-YR	6-YR	N	4-YR	6-YR
Total	2,416	31%	79%	2,622	41%	82%	2,654	40%	85%	2,690	39%	-
<i>College</i>												
College of Architecture	145	48%	79%	144	47%	81%	122	56%	83%	92	51%	-
College of Computing	158	23%	72%	164	46%	79%	163	49%	84%	171	50%	-
College of Engineering	1,522	27%	79%	1,658	37%	82%	1,759	34%	85%	1,831	32%	-
College of Sciences	256	44%	79%	290	47%	83%	287	46%	82%	299	55%	-
Ivan Allen College	173	45%	84%	169	50%	77%	157	51%	88%	127	55%	-
Scheller College of Business	162	31%	77%	197	50%	89%	166	58%	89%	170	56%	-

\* Redacted in accordance with FERPA policies.

The Scheller College of Business currently has the highest four-year graduation rate, at 56% for the Fall 2011 cohort. This is closely followed by Ivan Allen College (55%), the College of Sciences (55%), College of Architecture (51%), and College of Computing (50%). Indeed, only the College of Engineering falls below a 50% four-year graduation rate. These graduation rates have generally seen vast improvement over the years for most colleges. For example, the College of Computing has risen from an institute wide low of 23% for the Fall 2005 cohort to the second highest graduation rate for the Fall 2010 cohort of 56%. The College of Engineering, the largest college on campus, has seen some improvement in four-year graduation rates over time, but rates have generally remained relatively constant Fall 2008, falling somewhere between 30% and 35%.

While the College of Engineering may have trailed its peers in terms of four-year graduation rates, possibly as a function of credit requirements and extracurricular involvement, six-year graduation rates show a close grouping of all academic colleges at Georgia Tech. The Scheller College of Business (89%) and Ivan Allen College (88%) post the highest six-year graduation rates, but these are closely followed by their colleagues in the College of Engineering (85%), College of Computing (84%), College of Architecture (83%), and College of Sciences (82%). Indeed, every college now exceeds a six-year graduation rate of 80%, illustrating a relatively uniform distribution of six-year graduation rates across the institute. No one college substantially outperforms the others in terms of getting students to graduate within six years.

When looking more specifically at graduation rates by major, three programs have consistently shown impressive four-year graduation rates. The program in Applied Mathematics, the program in Biology, and the program in Psychology have consistently ranked at top majors for graduating within four years. For the Fall 2011 cohort, 67% of Applied Mathematics students graduated within four years. For Biology, the rate was 59% while Psychology followed at 56%. These three majors, all within the College of Sciences, not only have high rates for the Fall 2011 cohort, but they have demonstrated gains over time as well. For example, Applied Mathematics rose from 59% in Fall 2004 to the 67% that it recorded for the most recent cohort.

The greatest improvement over time was observed for the International Affairs and Modern Languages major. This major increased by twenty-nine percentage points, from 38% for the Fall 2004 cohort to 67% in the Fall 2011 cohort. Similarly, their six-year graduation rate of 100% for the Fall 2009 cohort is the best at Georgia Tech. Not surprisingly, this was followed by the Computer Science major, which mirrored the pattern of the school, rising from 30% to 51%. Finally, students declaring as Pre-Industrial Design majors saw improvements from 40% to 64%.

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While Applied Mathematics, Biology, and Pre-Industrial Design posted strong four-year graduation rates, these programs actually trailed their peers for six-year graduation rates. This might suggest that students who begin in these majors either graduate within four years or never at all. Overall, five departments posted six-year graduation rates in excess of 90%, another ten had rates over 85%, and twelve exceeded 80%.

A handful of majors actually saw declines in graduation rates. Materials Science and Engineering fell by nearly eleven percentage points while Chemistry fell by ten percentage points. Biomedical Engineering also saw a decline in graduation rates, from 41% to 35%, but this was also accompanied by a major increase in majors, almost doubling its enrollments.

### Student Activities

Participating in various activities while a student at Georgia Tech has the ability to accelerate or delay graduation outcomes. Certain activities may provide students with additional supports that help them stay on track to graduate on time. Other activities, such as the Co-Op, internship, or study abroad programs may offer academic and professional development while potentially, or intentionally, delaying the time to degree. Finally, other activities may be a distraction, harming the chances of finishing a degree within four or six years. The analyses that follow provide graduation rates for students who participated in activities at any time during their studies at Georgia Tech. It should be noted that the level and length of participation could also be related to graduation outcomes. However, for the purposes of this study, participation is simply defined as a yes-no indicator.

Table 7. FTFT Freshman Graduation Rates by Student Activity

	Fall 2005			Fall 2007			Fall 2009			Fall 2011		
	N	4-YR	6-YR	N	4-YR	6-YR	N	4-YR	6-YR	N	4-YR	6-YR
Total	2,416	31%	79%	2,622	41%	82%	2,654	40%	85%	2,690	39%	-
<i>Freshman Experience</i>												
FREX	1,961	32%	81%	2,023	41%	84%	2,102	40%	86%	2,452	39%	-
No FREX	455	27%	70%	599	40%	78%	552	39%	80%	238	42%	-
<i>GT 1000</i>												
GT 1000	1,399	31%	80%	1,759	40%	84%	1,886	39%	85%	1,803	37%	-
No GT 1000	1,017	32%	77%	863	42%	80%	768	42%	83%	887	43%	-
<i>Undergraduate Research</i>												
UROP	558	49%	95%	674	54%	95%	803	51%	94%	745	51%	-
No UROP	1,858	26%	74%	1,948	36%	78%	1,851	35%	81%	1,945	35%	-
<i>Study Abroad</i>												
Study Abroad	534	39%	97%	570	48%	97%	726	48%	98%	806	43%	-
No Study Abroad	1,882	29%	74%	2,052	39%	78%	1,928	37%	80%	1,884	37%	-
<i>Cooperative Education</i>												
Co-Op	494	17%	93%	454	21%	92%	559	18%	95%	634	17%	-
No Co-Op	1,922	35%	75%	2,168	45%	80%	2,095	46%	82%	2,056	46%	-
<i>Internship</i>												
Internship	307	35%	96%	424	47%	97%	562	49%	97%	547	37%	-
No Internship	2,109	31%	76%	2,198	40%	79%	2,092	38%	82%	2,143	40%	-
<i>Greek Life</i>												
Greek	275	31%	86%	278	19%	83%	752	38%	94%	915	31%	-
Non-Greek	2,141	31%	78%	2,344	43%	82%	1,902	41%	81%	1,775	43%	-
Note: Participation in each activity is defined as having ever engaged in the listed activity while a student at Georgia Tech.												

The Freshman Experience program is a first-year success program offered by the Department of Housing and Residence Life to assist in the development of academic and personal foundations while transitioning to Georgia Tech. Participation in the Freshman Experience program has consistently higher six-year graduation rates than

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non-participants. Four-year graduation rates for Freshman Experience participants exceeded those of non-participants by five percentage points in Fall 2005. However, the gap continued to narrow over time and the most recent cohort for Fall 2011 observed four-year graduation rates for non-participants that exceeded those that were involved in the Freshman Experience program. The differences in four-year rates were not statistically significant for most cohorts, suggesting little difference in outcomes based on participation. It should also be noted that the participation rate has increased over time. Indeed, 19% of first-time, full-time freshmen from the Fall 2005 cohort did not participate in the program. By Fall 2011, this had fallen to only a 9% non-participation rate.

GT 1000, the freshman seminar course, also showed higher six-year graduation rates for participants as compared to non-participants. However, the four-year rates for participants were consistently below those of non-participants. However, these differences have not consistently been statistically significant. This suggests that despite lower observed four-year graduation rates and higher observed six-year graduation rates, there may not be a major difference in participants and non-participants. As with the Freshman Experience program, the observed differences may be attributable to the increase in participation over time. In Fall 2005, 58% of freshmen participated in GT 1000 at some point during their time at Georgia Tech. For the Fall 2011 cohort, this had increased to a participation rate of 67%.

Another opportunity for students is through the Undergraduate Research Opportunities Program (UROP). This program connects students with faculty, industry partners, and peers to work on research projects at Georgia Tech. Students can receive course credit for their research, as well as opportunities for a stipend. The participants in the UROP program have significantly higher graduation rates for both the four-year and six-year thresholds. For the most recent cohorts, four-year rates for UROP participants exceeded those of non-participants by sixteen percentage points and six-year rates were thirteen points higher. One area of importance for the UROP program, as well as other student activities, is the self-selection into participation. Students who participate in undergraduate research tend to be high performing, successful students who are likely to graduate quickly regardless of their participation in the UROP program. Thus, while the high graduation rates are encouraging, they are likely a reflection of the types of students involved in the program rather than a measurement of the effect of the program itself.

Study abroad programs also show higher graduation rates for participants as compared to non-participants. Six-year graduation rates have consistently been approximately twenty percentage points higher for participants than non-participants. Four-year rates have held at around ten points higher for those who study abroad as compared to those who do not. Again, self-selection may contribute to these differences, but concerns that studying abroad delays the time-to-degree do not appear to be true for the types of students who choose to participate.

Georgia Tech also offers opportunities to participate in professional development programs. The cooperative education (Co-Op) program is a five-year program that allows students to alternate on-campus study with full-time employment. While some students may bring in enough credits through Advanced Placement or International Baccalaureate exams scores to participate in the co-op program and still graduate within four years, most students who participate would be expected to take longer to finish their degree. Indeed, this is reflected in much lower four-year graduation rates for students who participate in the cooperative education program. However, six-year rates are some of the highest for any program on campus. Co-op students tend to be highly motivated students, and this is reflected in their six-year graduation rates that consistently exceed ninety percent.

Similar patterns are observed with another professional development program, the internship program. Participation in an internship is less structured than the co-op program and students who were involved in an internship actually had higher four-year graduation rates than non-participants for every cohort until Fall 2011.

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Six-year rates exhibited a similar pattern to the co-op program, consistently exceeding non-participants by nearly twenty percentage points and hovering in the upper nineties.

Finally, participation in Greek life had lower four-year graduation rates but higher six-year graduation rates. This may suggest that involvement in fraternities or sororities delays the time-to-degree beyond four years, but helps with graduating within six years.

### **Conclusions**

Based on the analysis of these three measures of student outcomes – retention rates, four-year graduation rates, and six-year graduation rates – a few patterns emerged across all of these measures. To begin, record high retention and six-year graduation rates show exceptional progress over time and highlight the impressive accomplishments of our Georgia Tech students. Much of the gains in these areas have been the improvement seen in for domestic, out-of-state students. Unfortunately, the same cannot be said for our international students. These international students have impressive four-year graduation rates, but their declining retention and six-year graduation rates may warrant future study to ensure targeted support once they are on campus. Another pattern is with the high outcomes of female students. As women are making up a larger portion of the freshman cohorts and undergraduate class, their strong performance is reflected in the overall retention and graduation rates. Recently, men have seen improvements to retention rates that have narrowed the gap with their female colleagues and continue to help with overall retention. Black or African American and Hispanic or Latino groups have also seen improvements in recent years, with especially strong improvements to graduation rates since the Fall 2007 cohort. Underrepresented minorities as a whole have seen improvements across the board for both retention and graduation outcomes.

Some of these improvements based on student demographics have been reflected through academic measures as well. For example, the College of Computing has seen stellar improvement for retention, four-year graduation, and six-year graduation since the Fall 2005 cohort. While the College was behind their peer colleges in many of these outcome measures, they now find themselves performing above average in many areas.

Student activities were linked to outcomes as well. Most of the programs at Georgia Tech were associated with higher graduation outcomes, particularly for six-year rates. Co-Op programs add a year to the degree, delaying graduation, but the students that participate are consistently high quality students with stellar six-year graduation rates. Similarly, Greek students had very high six-year graduation rates, though lower four-year graduation rates.

Overall, all of these student characteristics are clearly related to the retention and graduation of students and interlinked as part of the full student experience. Students from a variety of backgrounds, enrolling in various academic programs, and participating in a multitude of activities show a consistent improvement in retention and graduation over time. The overall takeaway highlights that Georgia Tech continues to enroll exceptional students and offer engaging academic and social activities that improve student outcomes.