

First Year Transfer and Freshman Courses

» How do students do in their first year at Georgia Tech?

OFFICE OF INSTITUTIONAL
RESEARCH AND PLANNING

Comparison of Freshmen Students to Transfer Students

Summary

- Incoming freshmen take a larger course load over the academic year than transfer students; however, the number of classes taken per year for freshman students has decreased each year for the past nine years while the number of credits transferred in for freshman students has increased each year.
- Transfer students' GPA after one year of study is slightly lower than that of freshman students.
- The data for freshman students' reflect a decrease in their GPA from first semester to the end of their first year.
- Transfer student's GPA decreased from the sending institution GPA, however, differences from first semester to the end of the first year at Georgia Tech remained similar.
- Transfer student GPAs remain statistically equal from first semester to the end of the first year at Georgia Tech, while Freshman GPAs decrease slightly from first semester to the end of the first year at Georgia Tech.

Freshman Students First Year Fall 2007-2016

Freshman Count	# of Students	# of Classes	Avg # classes taken first year*	Average 1st Year GPA
200708	2,626	44,602	16.98	2.95
200808	2,636	44,421	16.85	2.97
200908	2,660	43,697	16.43	3.04
201008	2,712	44,079	16.25	3.10
201108	2,695	42,271	15.68	3.16
201208	3,044	46,864	15.40	3.24
201308	2,673	41,425	15.50	3.27
201408	2,809	41,717	14.85	3.31
201508	3,089	44,060	14.26	3.40
201608	2,876	37,787	13.14	3.42

Transfer Students First Year AY2007 - AY2016

Transfer students	# of Students	# of Classes	Avg # of classes taken first year	Average GT GPA 1st Year
2007	583	6,245	10.71	2.93
2008	656	7,031	10.72	2.92
2009	752	7,767	10.33	2.89
2010	803	8,326	10.37	2.85
2011	953	10,053	10.55	2.89
2012	817	8,674	10.62	3.04
2013	788	8,491	10.78	3.04
2014	787	8,607	10.94	3.10
2015	816	8,724	10.69	3.05
2016	906	9,627	10.63	3.07

Freshman Student Credits, GPA and GPA After One Year

Year	# of Students	Credits transferred in	Average of 1st Semester GPA	Average 1st Year GPA
2007	2626	11.70	3.11	2.95
2008	2636	12.38	3.10	2.97
2009	2660	13.08	3.14	3.04
2010	2712	14.66	3.21	3.10
2011	2695	15.46	3.28	3.16
2012	3044	16.56	3.36	3.24
2013	2673	18.34	3.37	3.27
2014	2809	20.17	3.41	3.31
2015	3089	21.28	3.46	3.40
2016	2876	22.00	3.51	3.42

Transfer Students Credits, Transfer GPA and GPA After One Year

Year	# of Students	Credits transferred in	Avg Transfer GPA	Average of 1st Semester GPA	Average GT GPA 1st year
2007	583	67.10	3.46	2.93	2.93
2008	656	67.68	3.42	2.91	2.92
2009	752	65.52	3.42	2.90	2.89
2010	803	66.00	3.44	2.77	2.85
2011	953	65.34	3.44	2.88	2.89
2012	817	67.38	3.57	3.04	3.04
2013	788	66.85	3.62	3.02	3.04
2014	787	66.97	3.63	3.12	3.10
2015	816	69.29	3.64	3.04	3.05
2016	906	69.46	3.65	3.03	3.07

Which colleges send students to Georgia Institute of Technology?

Top Sending Institutions to Georgia Tech AY2007 to 2016				
College	# of Undergraduate Transfers	Avg. Transfer GPA	Avg. 1st Semester GPA	Avg. 1st Year GPA
GSU Perimeter College	1,221	3.50	2.97	2.99
Georgia Southern University	872	3.46	2.72	2.73
Georgia State University	863	3.56	2.99	2.99
Southern Polytechnic State University	472	3.48	2.91	2.92
Kennesaw State University	364	3.56	2.92	2.93
University North Georgia - Dahlonega	262	3.54	3.04	3.06
University Of Georgia	250	3.61	3.32	3.33
University Of West Georgia	189	3.50	2.93	2.93
Georgia College & State University	180	3.48	3.01	3.01
Armstrong State University	179	3.37	3.06	3.06
U Of North Georgia-Gainesville	160	3.47	2.96	2.96
Valdosta State University	146	3.45	2.71	2.78
Dalton College	108	3.59	3.05	3.01
Georgia Gwinnett College	108	3.70	2.98	2.98
Clayton State University	102	3.52	2.77	2.80
Middle Georgia State College	92	3.52	2.91	2.79
Miami-Dade College North	91	3.66	2.96	2.91
Macon State College	80	3.46	2.81	2.81
Columbus State University	78	3.59	2.82	2.90
Gordon State College	64	3.59	2.89	2.90
Savannah State University	64	3.31	1.86	1.98
Emory University	62	3.57	3.65	3.56
Augusta State University	51	3.54	3.21	3.13
Berry College	49	3.49	3.04	3.13

- Georgia Tech receives the largest number of undergraduate transfer students from University System of Georgia Schools.
- Overall, student GPAs drop from the sending institution to Georgia Tech in both the first semester and first year.

Transfer GPA by Race/Ethnicity (2007 to 2016)

Race/Ethnicity	# of Transfers	Transfer GPA	GPA After One Year at GT
Amer Indian	9	3.53	2.93
Asian	1,188	3.58	3.00
Black	786	3.38	2.58
Hispanic	634	3.51	2.91
Non-Res	975	3.69	3.19
Pacific Island	5	3.69	3.28
Two or More	212	3.54	2.90
Unknown	57	3.45	2.95
White	3,995	3.52	3.02
Grand Total	7,861	3.53	2.98

Which courses have the highest number of repeats for freshman students and transfer students?

- Although some courses have a large number of students failing, the overall percentage of students failing in specific subject areas is low. The course with the highest percentage of students failing is ACCT2101 with 23.57% of students receiving a D or F grade, followed by MATH1501 with 16.81 and CHEM1311 with 14.71% of students receiving a D or F grade.
- The overall failure rate of freshman taking courses during the first year of study is approximately 5.3 percent.
- Transfer students had a higher rate of failing grades in courses taken during the first year; however, the overall failure rate of transfer students taking courses in their first year at Georgia Tech is 6.7 percent.
- The course with the highest percentage of transfer students failing is CHBE2100 with 21.06 percent of students receiving a D or F grade followed by PHYS2211 with 20.59 percent, CS1372 with 19.82 percent and CHEM1311 with 18.11 percent of students receiving a D or F grade.
- Transfer students had slightly higher failure rates than freshmen in similar courses taken during the first year at tech (highlighted in gold).

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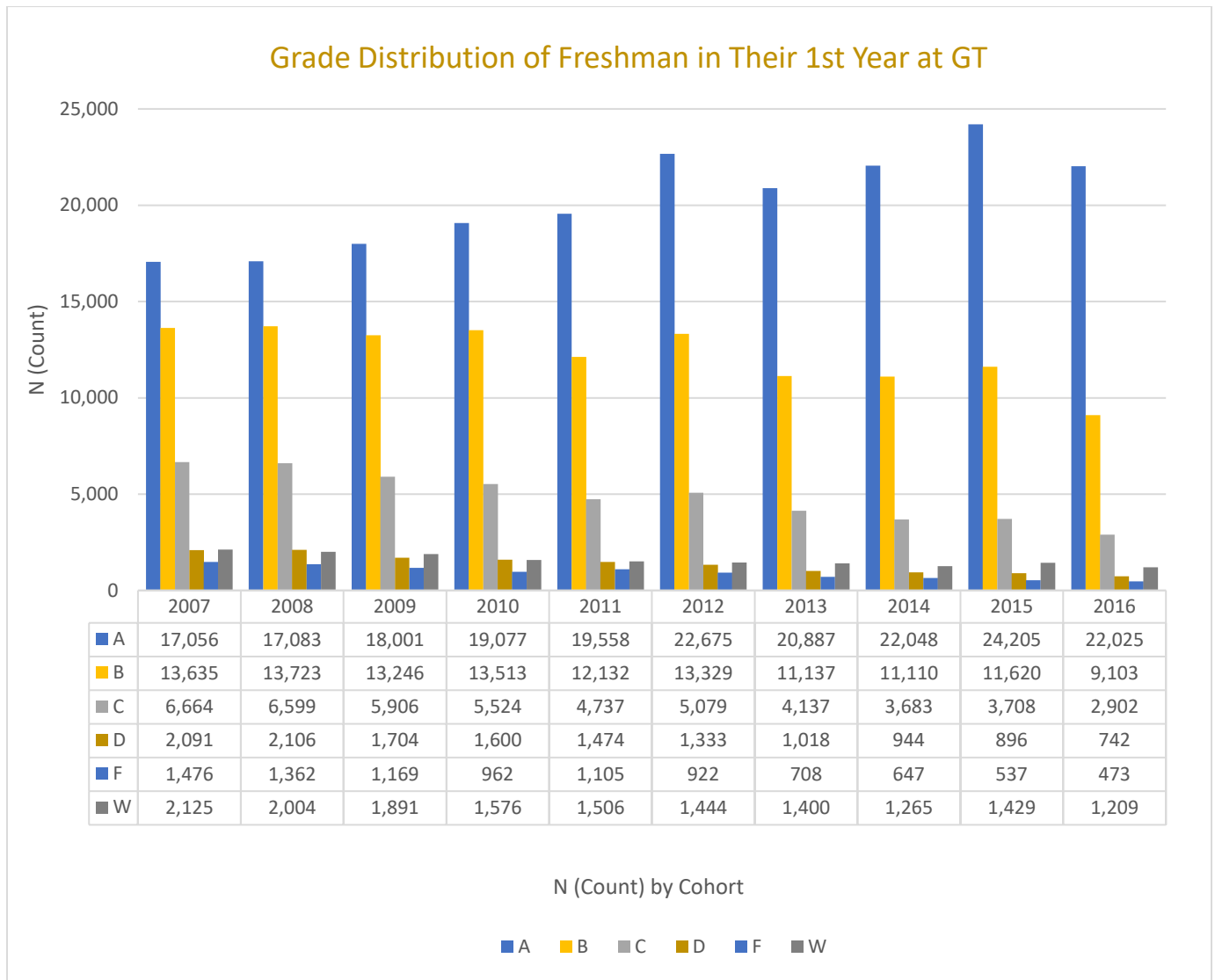
Freshman Top 25 Courses with Withdrawals or Failing Grades							
First Year of Courses from Fall 2007 Cohort to Fall 2016 Cohort							
Course	D	F	Fail	W	Total	# Taking Course	% Failing
CS1371	1,132	1,158	2,290	982	3,272	16,842	13.60%
MATH1502	1,299	850	2,149	718	2,867	18,757	11.46%
PHYS2211	1,247	744	1,991	873	2,864	15,880	12.54%
MATH1501	929	757	1,686	406	2,092	10,031	16.81%
CHEM1310	532	359	891	185	1,076	12,058	7.39%
MATH2401	443	261	704	316	1,020	8,802	8.00%
ENGL1102	199	251	450	496	946	25,151	1.79%
PHYS2212	369	198	567	299	866	6,149	9.22%
PSYC1101	287	201	488	335	823	10,729	4.55%
GT1000	96	139	235	490	725	20,261	1.16%
HPS1040	256	124	380	287	667	9,247	4.11%
CS1331	240	200	440	206	646	5,101	8.63%
ENGL1101	125	200	325	213	538	14,979	2.17%
CHEM1211K	300	125	425	109	534	4,648	9.14%
CS1301	206	107	313	213	526	5,018	6.24%
MATH2403	178	130	308	177	485	3,806	8.09%
COE2001	162	92	254	229	483	5,189	4.89%
MSE2001	136	85	221	258	479	4,482	4.93%
BIOL1510	202	66	268	147	415	4,451	6.02%
MATH1552	151	97	248	156	404	3,112	7.97%
MATH1553	178	82	260	141	401	4,873	5.34%
ACCT2101	125	81	206	173	379	874	23.57%
CHEM1212K	188	82	270	99	369	4,348	6.21%
CS1332	96	95	191	164	355	2,503	7.63%
CHEM1311	182	78	260	77	337	1,767	14.71%

Transfer Students Top 25 Courses with Withdrawals or Failing Grades

First Year of Courses from AY Cohorts 2007-2016

Course	D	F	Fail	W	Total	# taking course	% Failing
CS1371	251	217	468	270	738	2,927	15.99%
COE2001	115	70	185	188	373	1,949	9.49%
MATH1522	134	77	211	123	334	1,873	11.27%
MSE2001	89	39	128	193	321	2,679	4.78%
PHYS2212	109	56	165	131	296	911	18.11%
COE3001	107	56	163	130	293	1,712	9.52%
ME3322	101	67	168	113	281	1,192	14.09%
ECE3710	66	25	91	141	232	1,741	5.23%
CHBE2100	85	54	139	73	212	660	21.06%
CS1331	53	55	108	85	193	833	12.97%
PHYS2211	62	36	98	94	192	476	20.59%
ME2202	61	43	104	80	184	854	12.18%
ME3340	64	15	79	81	160	737	10.72%
ME2016	54	33	87	72	159	806	10.79%
ISYE3025	47	31	78	78	156	740	10.54%
ECE2040	55	31	86	64	150	709	12.13%
CS1332	32	24	56	90	146	638	8.78%
CS1171	0	0	0	138	138	280	0.00%
ISYE2027	46	13	59	72	131	753	7.84%
MATH3012	28	19	47	83	130	470	10.00%
PSYC1101	37	18	55	70	125	1,204	4.57%
CS1372	52	34	86	38	124	434	19.82%
MATH2403	51	22	73	51	124	896	8.15%
HPS1040	30	13	43	80	123	1,550	2.77%
CS1301	27	22	49	73	122	559	8.77%

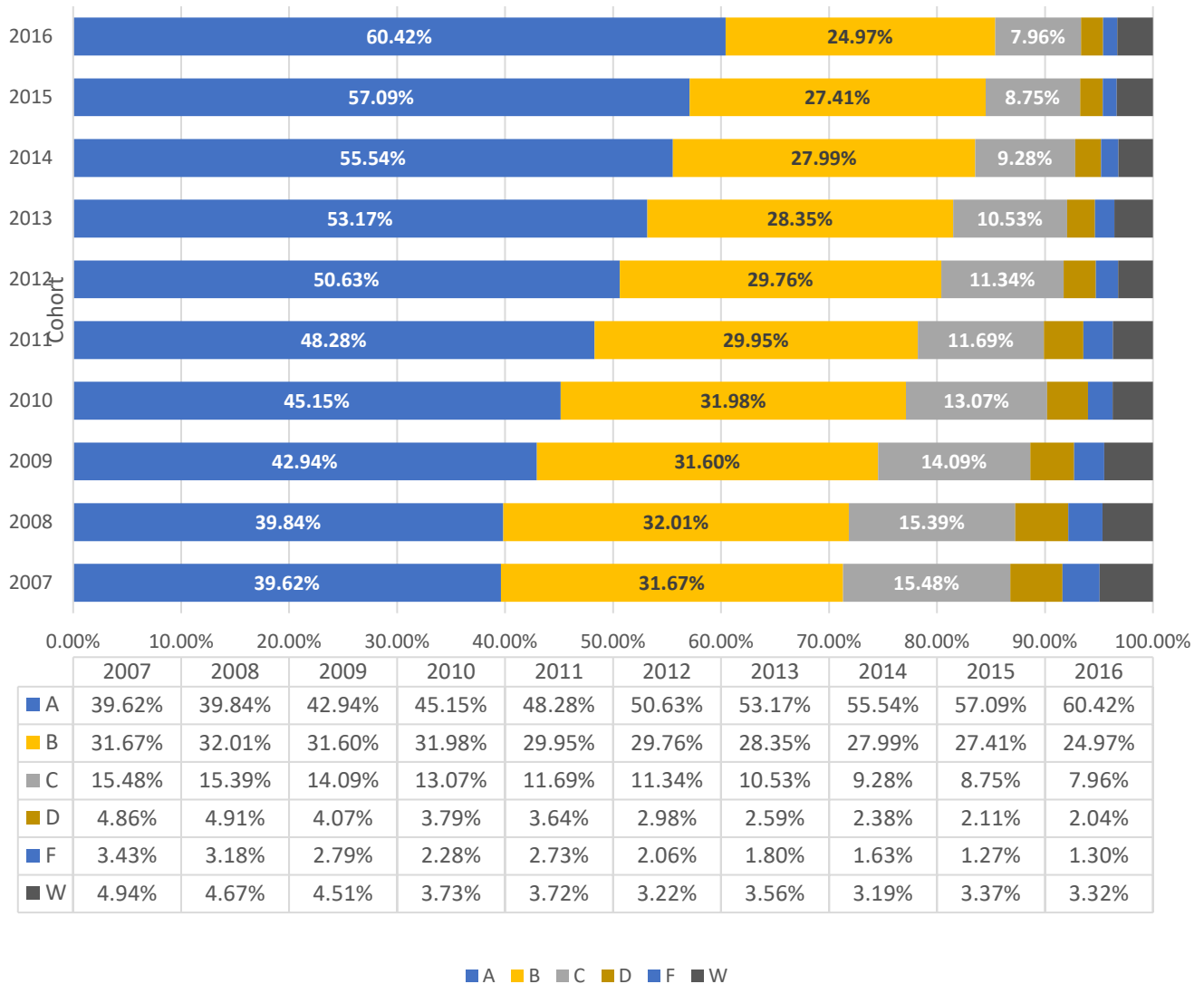
What is the grade distribution for first-time freshman and transfer students in their first year?



- From 2007 to 2016, the number of A grades awarded to students has increased; however, the selectivity has also increased at Georgia Tech with an admissions yield in 2007 of 45% decreasing to a low of 33% in 2014. Georgia Tech test scores have been rising over time (both SAT and ACT) for incoming students.

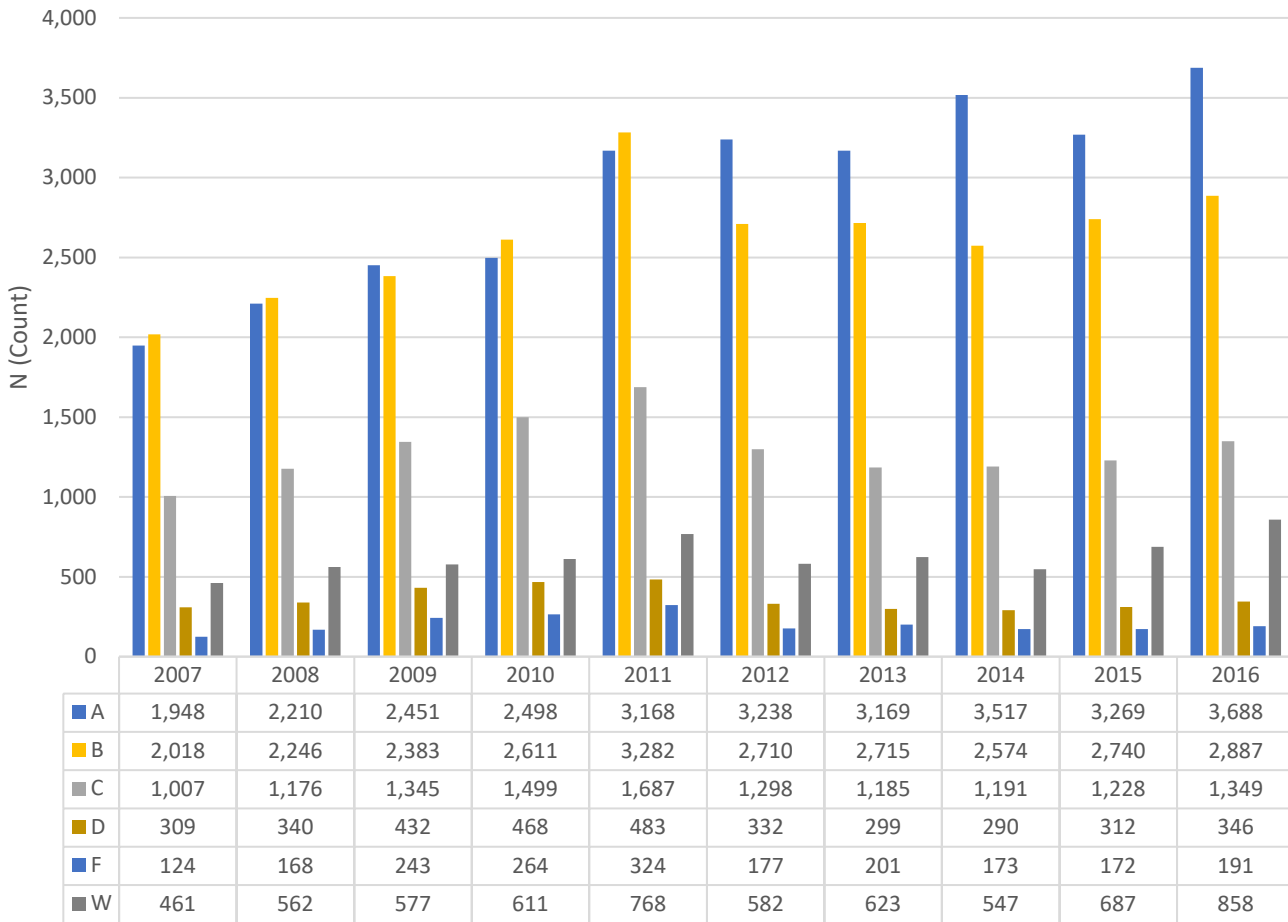
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Freshman Grades by Percent Distribution



- The percentage of ‘A’ grades awarded to Freshman students has increased from 39.62% of grades awarded in the first year of study for the Fall 2007 cohort of freshman to 60.42% of grades awarded for the first year of study for Fall 2016 cohort of students.
- All other grades awarded (B, C, D and F) have decreased from Fall 2007 to Fall 2016.
- Unlike the freshman grade distributions for the first year of study, transfer students had grades that were evenly distributed over time. Although the percentage of students who earned a grade of “A” has increased slightly, it does not mirror the changes over time in the freshman grade distributions.

Grade Distribution of Transfer Students in Their 1st Year at GT

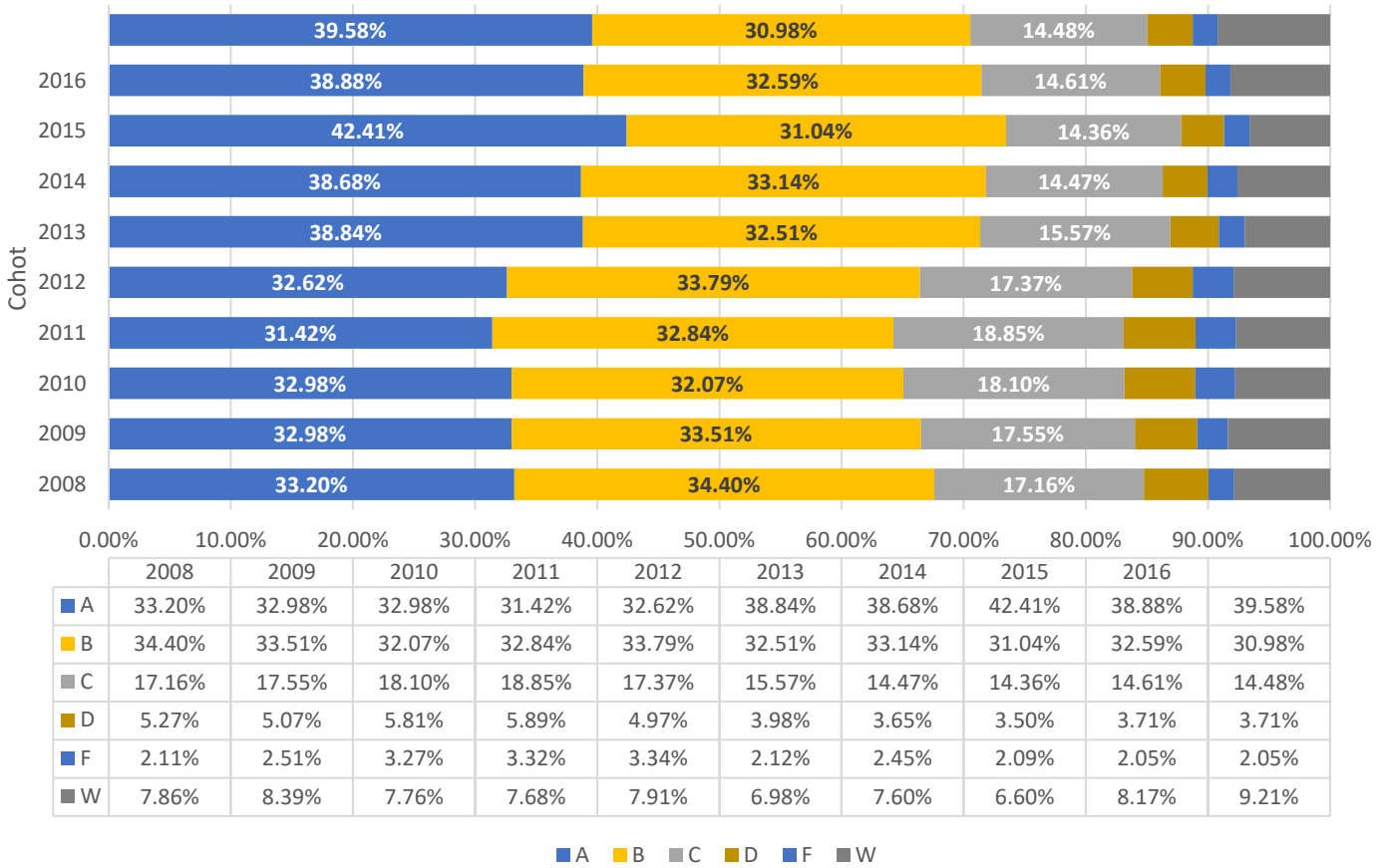


N (Count) by Cohort

■ A
 ■ B
 ■ C
 ■ D
 ■ F
 ■ W

- Grade distribution of transfer students in their first year of study at Georgia Tech has had a slight increase in the distribution of As awarded in the past five years; however, there are some fluctuations from year to year. The number of withdrawals for transfer students has increased relative to other grade types.

Transfer Grades by Percent Distribution



- The percentage distribution of grades awarded remains relatively stable over time with fewer D and F grades in the past five years.

- Is there a difference in performance between transfer students based upon the type of transfer institution, either 2-Year or 4-Year?

Purpose: To determine if more intervention is needed for incoming transferring students based on the type of institution that they are coming from.

A: 2-Year and 4-Year transfer students do not have significantly different average incoming GPA's.

Type of Transfer College to GT		
Cohort	2 Year College	4 Year College
2007	126	457
2008	140	516
2009	136	616
2010	142	661
2011	182	771
2012	147	670
2013	160	628
2014	149	638
2015	193	623
2016	112	794

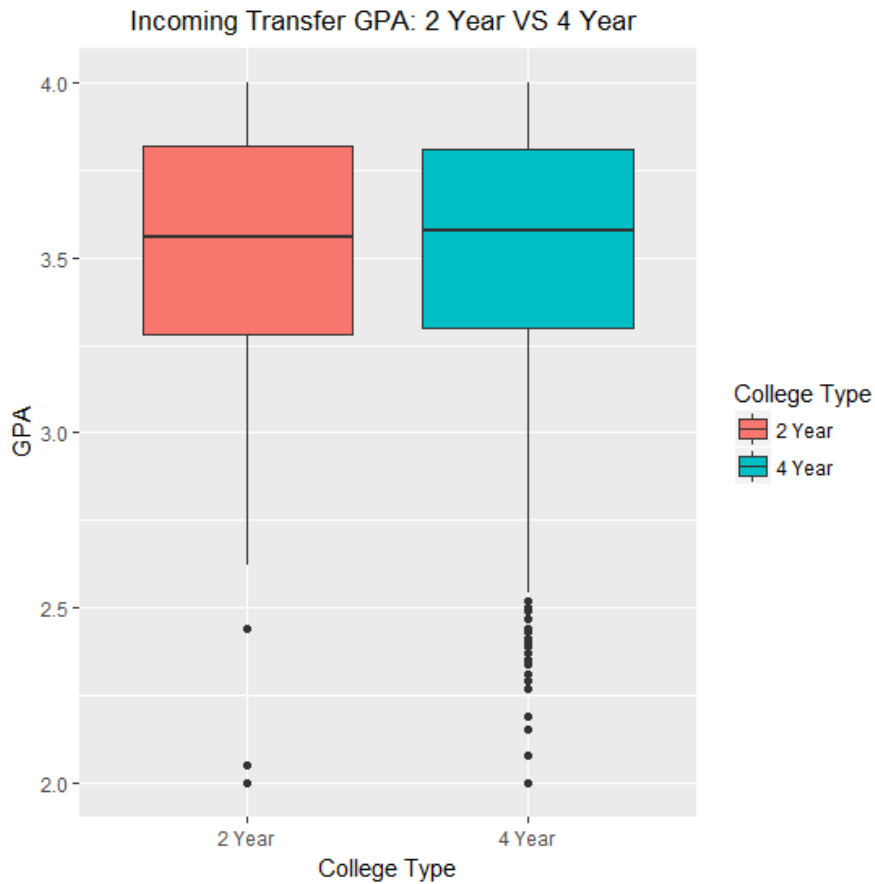
Transfer Students' GPA by Type of College Student Transferred From AY2007-2016

Type of College	# of Students	Avg. Transfer GPA	Avg. First Term GPA	Avg. First Year GPA
2 Year	1,487	3.53	2.99	3.02
4 Year	6,374	3.54	2.96	2.97

2 Year College			4 Year College		
College of Study	Avg Transfer GPA	Avg GPA after one year	College of Study	Avg Transfer GPA	Avg GPA after one year
	3.53	3.02		3.54	2.97
Computing	3.61	3.11	Computing	3.64	3.04
Design	3.47	3.13	Design	3.47	3.21
Engineering	3.52	2.99	Engineering	3.53	2.93
Ivan Allen	3.55	3.17	Ivan Allen	3.46	3.11
Scheller	3.53	3.18	Scheller	3.53	3.30
Sciences	3.52	2.91	Sciences	3.56	2.91

The, *Incoming Transfer GPA: 2 Year College VS 4 Year College*, boxplot graph is a picture of the five number summary: maximum, third quartile, median, first quartile and minimum for each transferring institution type.

Five Number Summary				
Minimum	1st Quartile – 25th Percentile	Median – 50th Percentile	3rd Quartile – 75th Percentile	Maximum
Lowest Observed GPA	Splits off the lowest 25% of GPAs from the highest 75% of GPAs	Half of the students had scores above or below this value.	Splits off the highest 25% of GPAs from the other 75% of GPAs	Highest Observed GPA



A t-test that compared mean GPA's at the $\alpha = 0.05$ level of significance indicated that there is not a statistically significant difference in incoming GPA between 2 year ($\mu=3.526$) and 4 year ($\mu=3.534$) transfer institution types.

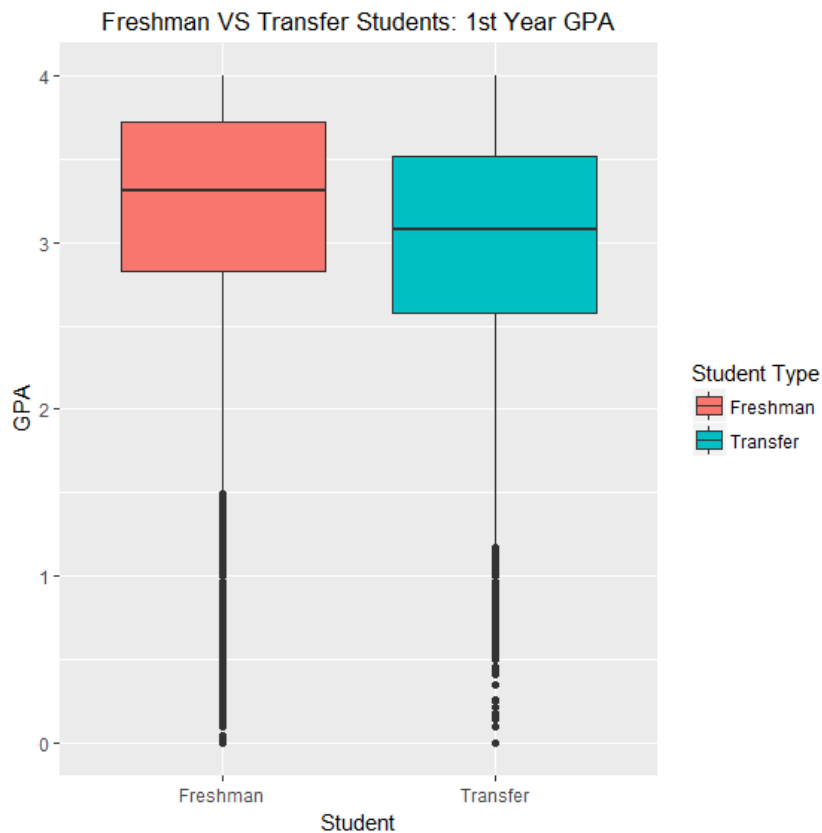
Five Number Summary					
School Type	Minimum	1st Quartile – 25th Percentile	Median – 50th Percentile	3rd Quartile – 75th Percentile	Maximum
2 Year	2.00	3.28	3.56	3.82	4.00
4 Year	2.00	3.30	3.58	3.81	4.00

- Is there a difference in the first year performance between transfer students and incoming freshman (non-transfers)?

Purpose: To determine if more intervention is needed to improve success outcomes for incoming transferring students.

A: Transfer and freshman students do have significantly different average end of first year GPAs.

The, Freshman VS Transfer GPA, boxplot graph is followed by the five number summary: maximum, third quartile, median, first quartile and minimum.



What is the graduation rate for transfer students who received Ds or Fs in their first year at Georgia Tech compared to students with the same year of entry?

Transfer Students Graduation Rate in Relationship to GPA 2007 to 2016

Transfer Students Who Graduated						
Cohort	Total Transfer Students	D and F students who Graduated	Graduation Rate for D and F students	Avg Transferring GPA of Students w/D & F	Average 1st Sem GPA	Average 1st Year GPA
2007	583	33	5.66%	3.17	1.87	2.15
2008	656	32	4.88%	3.18	1.75	2.24
2009	752	38	5.05%	3.22	1.65	2.11
2010	803	58	7.22%	3.27	1.68	2.12
2011	953	46	4.83%	3.26	1.71	2.14
2012	817	30	3.67%	3.42	2.07	2.30
2013	788	18	2.28%	3.59	1.72	2.29
2014	787	14	1.78%	3.49	2.17	2.74
2015	816	8	0.98%	3.49	2.35	2.77
Transfer Students Who Did Not Graduate						
Cohort	Total Transfer Students	Did not Graduate	% Students Not Retained	Avg Transferring GPA of Students	Average of 1st Sem GPA	Average of 1st Year GPA
2007	583	15	2.57%	3.30	1.59	1.68
2008	656	21	3.20%	3.19	1.36	1.47
2009	752	31	4.12%	3.25	1.12	1.27
2010	803	26	3.24%	3.30	1.22	1.41
2011	953	29	3.04%	3.21	1.16	1.30
2012	817	15	1.84%	3.33	1.30	1.38
2013	788	24	3.05%	3.30	0.95	1.30
2014	787	26	3.30%	3.39	1.53	1.90
2015	816	34	4.17%	3.47	1.34	1.77

- Transfer students who made D and F grades during their first year have a very low rate of graduation at Georgia Tech. Overall, most students with a GPA of less than 1.60 in their first semester do not graduate from Georgia Tech. Students who were able to pull up their GPA in the second semester above 2.0 had a slightly higher chance of graduating, with approximately 5.5% of students graduating within 5 years.

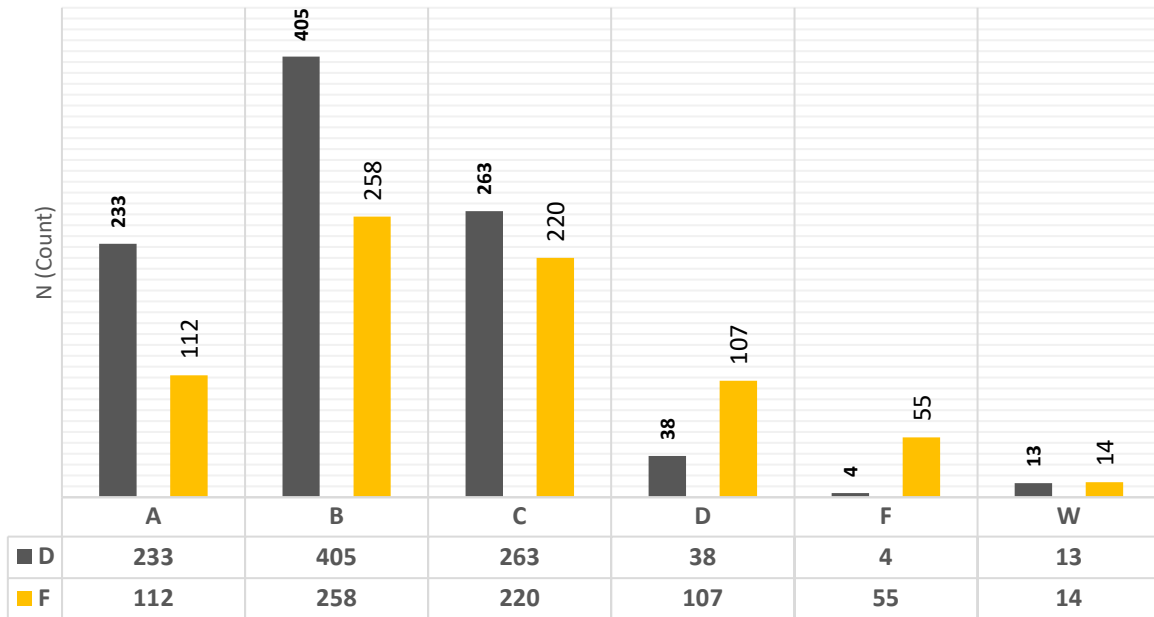
Grade Forgiveness for Freshman Students

- 1,736 students retook classes for grade forgiveness from 2011 to 2016. The class with the most retakes was CS1371 Computing for Engineers, followed by MATH1502 Calculus II. Approximately 60% of the student retaking courses were in the College of Engineering and College of Science.

The courses listed below are the top courses taken for grade forgiveness.

Top Courses for Grade Forgiveness		
CS1371	Computing for Engineers	281
MATH1502	Calculus II	239
PHYS2211	Intro Physics I	147
MATH2401	Calculus III	124
MATH1501	Calculus I	109
CHEM1211K	Chemical Principles I	97
CHEM1310	General Chemistry	81
MATH1552	Integral Calculus	49
CS1331	Intro-Object Orient Prog	43
CHEM1212K	Chemical Principles II	42
CS1301	Intro to Computing	38
MATH1553	Intro to Linear Algebra	35
MATH2403	Differential Equations	33
ENGL1102	English Composition II	29
CS1332	Data Struct & Algorithms	26
MATH1551	Differential Calculus	24
CHBE2100	Chem Process Principles	20
PHYS2212	Intro Physics II	18
MATH1512	Honors Calculus II	16
COE2001	Statics	15
ECON2106	Prin of Microeconomics	15
CHEM1315	Survey of Organic Chem	14
MSE2001	Prin&Appl-Engr Materials	11
PSYC1101	General Psychology	11
Total:		1,736

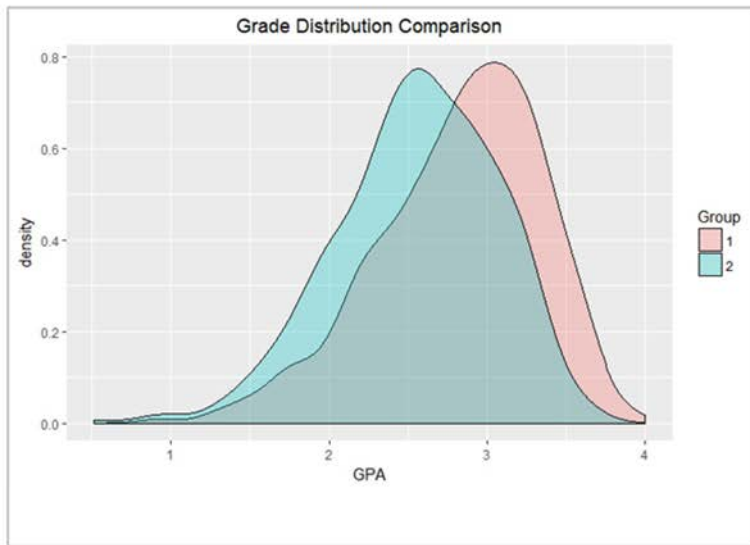
Replacement Grades For D And F Courses



- Overall, most students who retook courses had higher grades during the retake with most students earning a B or C grade after retaking the course.
- Students with a first grade of 'D' in a course tend to do better overall than students who received an initial grade of 'F' in their first course.

Were the final GPAs of students who repeated two courses worse than those students who only repeated one course?

A: There is a statistically significant difference between the scores of Group-1 (One Course Repeat) compared with the scores of Group-2 (Two Course Repeats) indicating that those students that retake more than one course have a greater need for intervention to be successful at Georgia Tech.



	Group 1	Group 2
Lowest GPA	0.87	0.52
Average GPA	2.82	2.55
Middle GPA Value	2.89	2.58
Highest GPA	4.00	3.73

