Georgia Institute of Technology

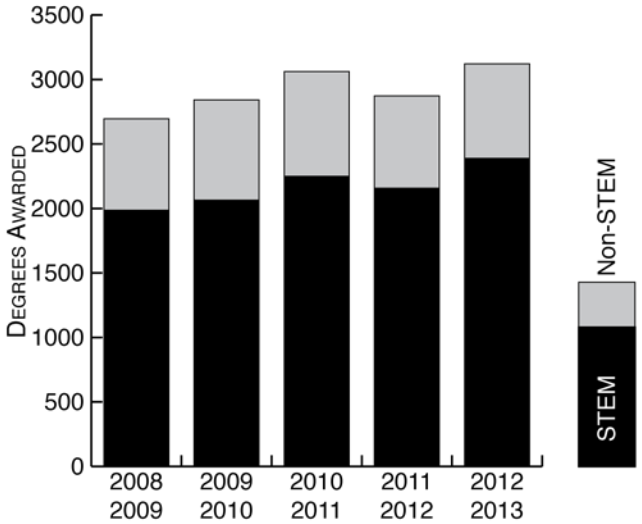
Institutional Mission and Student Body Profile

The Georgia Institute of Technology (Georgia Tech) is a science and technology-focused learning institute renowned for its deeply-held commitment to improving the human condition. Considered one of the top research universities in the United States, Georgia Tech influences major technological, social, and policy decisions. The institute was ranked in 2014 as #7 among public universities by *U.S. News & World Report*, and its undergraduate College of Engineering programs are consistently ranked among the top five in the United States The Georgia Tech community observes the motto of "Progress and Service" through effectiveness and innovation in teaching and learning, research advances, and entrepreneurship in all sectors of society.

A highly selective public institution, Georgia Tech saw an average SAT score of 1420 for its fall 2013 freshmen. The undergraduate enrollment in fall 2013 was comprised of 14,558 students, 80.4% of whom were enrolled in STEM majors. Georgia Tech's largest school is engineering, which had a fall 2013 enrollment of 9,278. (See Appendix A for undergraduate enrollment by college.) The typical Georgia Tech undergraduate is of traditional age (≤ 24), enters as a freshman, lives on campus, and is seeking a first undergraduate degree. In addition to its undergraduate enrollment, the institute had a fall 2013 enrollment of 3,518 students seeking a master's degree and 3,378 students seeking a Ph.D.

In 2012-13, we achieved a historic first-to-second-year retention rate of 96% and a historic high six-year graduation rate of 82%. An increase in overall enrollment and in STEM majors, as well as the number of bachelor's degrees conferred over a five-year period, points to Georgia Tech's ability to help address the workforce and policy needs of the future. Of the 14,594 undergraduate degrees earned by the 2009-2013 cohorts, 10,846 (74%) of the degrees were in STEM fields. Georgia Tech is a major producer of STEM degrees in the United States.

Five Year History of
STEM and Non-STEM Degrees Awarded



Although Georgia Tech is a highly selective institution and most students enter the institute well prepared academically, we have populations of students who may be at a higher risk not to complete their degrees. These populations include students who experience academic performance issues, as well as populations traditionally considered underserved in postsecondary education. In fall 2013, 826 (5.7%) of our 14,558 undergraduates were in less than "good" academic standing with 379 on academic probation and 447 on academic warning (see the Georgia Tech Academic Catalog for rules on academic standing). Underserved populations at Georgia Tech in fall 2013 also included underrepresented minorities (14%), veterans (less than 1%), students with disabilities (3%), adult learners (3%), first generation students (an estimated 5-7%), and Pell recipients (18%). This update includes strategies and activities for addressing the needs of these populations and plans for measuring successful interventions.

Georgia Tech students have high levels of participation in optional programs known to impact success. These programs include our first-year seminar, innovative living-learning communities, a robust co-op/internship program, wide-ranging undergraduate research opportunities, and extensive study abroad options. We have also expanded flipped and blended classrooms across several disciplines and have involved larger numbers of students in problem-based and interactive classroom approaches. Georgia Tech has observed that engaged students are more likely to have successful academic outcomes and higher graduation rates. Our completion goals and strategies include interventions that address populations at greater risk for not completing their degrees (a risk modeling approach), as well as emphasis on high-impact optional programs that correlate with higher levels of student success and involve large numbers of participants (an impact modeling approach).

Institutional Completion Goals and Strategies

Georgia Tech is engaged in the following *Complete College Georgia* goals:

- Goal 1: Increase in the number of undergraduate degrees awarded by USG institutions.
- Goal 4: Provide intrusive advising to keep students on track to graduate.
- Goal 8: Restructure instructional delivery to support educational excellence and student success.
- Other Goal: Promote high-impact educational practices throughout the undergraduate experience.

Strategies related to these goals include:

I. Target increases in access and completion for students traditionally underserved in postsecondary education. (Goal 1)
II. Increase degree completion in STEM fields. (Goal 1)
III. Provide advising and programming to promote student success and ensure that interventions are provided for students who are off track academically. (Goal 4)
IV. Implement alternative delivery models including online courses, supplemental instruction, and flipped classrooms. (Goal 8)
V. Provide high-impact curricular and co-curricular opportunities to enhance academic development. (Related goal: Other)

SUMMARY OF GOALS, HIGH-IMPACT STRATEGIES AND ACTIVITIES

Strategy I: Target increases in access and completion for students traditionally underserved in postsecondary education. (Goal 1)

Activities related to Strategy 1 include:

- The identification of students with the profiles of veterans, first generation college students, underrepresented minorities, low-income students (Pell recipients), adult learners, and students with disabilities
- A Veteran's Resource Center
- Disability services for students (ADAPTS)
- A special section of GT 1000 (freshman seminar class) for first generation students
- A committee that focuses on the needs of first generation students and disconnected youth
- The Georgia Tech Promise scholarship to improve financial access for low-income students
- A summer bridge program plus a range of year-round program options for matriculated students offered by the Office for Minority Education: Educational Services (OMED) to assist underrepresented minorities
- Automatic acceptance and tuition assistance for valedictorians and salutatorians from Atlanta Public Schools (beginning with the summer/fall 2015 cohort)

The Director of Veterans Resources engages in direct outreach to veterans and helps to educate the campus community about veterans' issues.

An improved awareness of disability services on campus has resulted in an increase in the self-reporting of students with disabilities over the past several years (see Appendix B for five-year totals). ADAPTS advocates for students with disabilities, helps to arrange appropriate accommodations, provides individual coaching sessions for students, and offers resources for faculty.

A committee focusing on the unique needs of first-generation, foster, and homeless students has provided direct outreach through financial and practical assistance. This committee meets regularly to explore additional methods of support for these populations. To date, the following steps have been taken:

<u>First-Generation Activities and Services</u>

- GT 1000 (first-year seminar class) designated for first generation students
- Data on first generation status collected in BANNER beginning with fall 2013 cohort
- FirstGen Student Organization
- GradFund implemented to cover commencement expenses for first generation students
- Coca-Cola scholarship awarded to cover study aboard, conference, and other travel expenses for first generation students
- FirstGen Faculty/Staff Committee meets regularly to discuss additional initiatives

<u>Foster and Homeless Youth Activities and Services</u>

- Campus liaison created
- Tech Promise scholarship available to help cover cost of education
- Emergency Fund established (administered by Dean of Students)
- Suit Collection (faculty/staff have donated suits for students to check out and use for interviews and career fairs
- Inter-session housing provided (so that homeless students have a place to stay between semesters)

Our first generation students will be closely observed in the coming years for academic progress and retention and graduation rates.

The *G. Wayne Clough Georgia Tech Promise Program* is available to dependent Georgia residents pursuing their first undergraduate degree who meet the eligibility requirement of having a family income of less than $33,300. Awards from this program are combined with other financial aid, including Pell and federal work-study opportunities, to improve the access of low-income students to a Georgia Tech education. For 2013-14, nearly 200 students qualified for a *Promise* scholarship of over $11,000 each.

Beginning with the summer/fall 2015 cohort, Georgia Tech will offer automatic acceptance and four-year tuition assistance to all valedictorians and salutatorians from Atlanta Public Schools.

The Office of Minority Education: Educational Services (OMED) provides a range of services designed to promote the success of underserved minorities at Georgia Tech. *Challenge* is a five-week, intensive residential summer program for incoming freshmen designed to prepare students for the Georgia Tech experience. The fall 2013 GPA's of summer 2013 Challenge participants averaged 3.20 compared to a 2.95 average GPA for underrepresented minority incoming freshmen who did not participate. Beginning next year, we will track the graduation rates of students who have participated in Challenge and compare these rates to those of non-participants.

The *Team Coach Program* offers the support of junior and senior OMED ambassadors to minority freshmen in order to assist them both academically and socially throughout their first year. In turn, the ambassadors benefit from leadership training and experience. The *Transitions* program offers networking opportunities for transfer students.

The *African-American Male Initiative (AAMI*) helps to address a negative performance trend in the African-American male population. In fall 2013, AAMI students achieved a 3.25 average GPA compared to a 3.04 average GPA for African-American males who did not participate and a 3.05 average GPA for all males. In the coming year, we will track the graduation rates for students who have participated

in AAMI to better understand the success rate of these participants.

OMED also offers workshops, study groups, tutoring, and *Concept Classes*, topic-specific lectures that deal with course material historically found to be the most challenging. See Appendix C for GPA outcomes for OMED's Challenge and AAMI participants.

Retention rates of underserved populations represent interim measures of success. The ultimate assessment of success is measured by the graduation rates of students with the above risk attributes. We are currently developing methods for appropriate tracking of our veterans, adult learners, first-generation students, and students with disabilities. Retention and graduation rates for these demographics will be available in the near future.

In the past year, we studied the retention and graduation rates for our Pell recipients and underrepresented minorities. The first-to-second-year retention rate for the 2012 cohort was 94% for Pell recipients compared to 96% for non-Pell students. For the 2007 cohort, graduation rates were lower for Pell recipients versus non-recipients (four-year, 34% vs. 43%; five-year, 71% vs. 77%; and six-year, 81% vs. 82%). While our Pell students are taking longer to graduate, the six-year graduation rate difference for Pell vs. non-Pell students for the 2007 cohort was not statistically significant.

We observed that graduation rates for our two largest underrepresented populations were lower than rates for the overall student population, while retention rates were mixed. For example, our six-year graduation rate for the 2007 cohort was 75% for African-American students and 73% for Hispanic/Latino students compared with an overall six-year rate of 82%. Our first-to-second-year retention rate for the 2012 cohort was 92% for African-American students and 97% for Hispanic/Latino students (96% overall).

For groups other than underrepresented minorities and Pell recipients, our objective is to accurately track these populations and to study their retention and graduation rates. We will continue current interventions that are appropriate for each of these populations and seek out opportunities for improvement.

Our first-to-second-year retention has steadily improved from 85% for the 1993 cohort to a historic 96% for the 2012 cohort. The six-year graduation rate also reached a historic high of 82% for the 2007 cohort (having improved from a 69% rate for the 1993 cohort). However, continued targeted interventions are needed for students who possess risk factors. A Retention-Progression-Graduation (RPG) report that we plan to create and implement beginning fall 2015 will allow the identification of students with multiple risk factors.

Appendix D contains enrollment and number of degrees awarded according to select populations. Appendix E includes retention and graduation rates for the institute as a whole. Readers are encouraged to review our *Annual First-Time Freshman Retention Study* for 2013, available at *http://www.irp.gatech.edu/publications/annual-first-time-freshmen-retention-study*. This report provides more detailed retention and graduation rates by gender, ethnicity, Pell status, freshman seminar enrollment, Greek participation, residency, SAT scores, and other factors.

Strategy II - Increase degree completion in STEM fields. (Goal 1)

The sustained economic impact made possible through a better-prepared STEM workforce is significant, and graduating a larger number of STEM students to meet workforce needs is a high priority for Georgia Tech.

Efforts to recruit and retain larger numbers of female students are vital, as women represent one of our best opportunities for increases in STEM fields. The Technology, Engineering, and Computing (TEC) Camp, a week-long event held each summer, exposes middle school girls to engineering and computing topics. The annual Engineering Career Conference gives high school women a day on campus to hear from 11 engineering majors in order to get a better idea of what each major involves and the types of employment one can aspire to with each major. Women recruited as engineering students at Georgia Tech have the option to be paired with a mentor, become eligible for corporate-sponsored scholarships, and have the opportunity to assume various leadership positions. One such leadership position is the Women in Engineering Student Ambassador Program. Through this program, undergraduate women speak to individual math and science classes in elementary, middle, and high schools to build interest and exposure to engineering fields for K-12 students. During these school visits, ambassadors also incorporate engineering hands-on activities that are designed to engage students and to peak their interest in math, science, computing, and engineering.

The sustained effort to recruit and engage women in STEM fields at Georgia Tech has been successful. Over the past five years, the number of women enrolled in STEM majors at Georgia Tech has increased from 2,593 (19% of total undergraduate enrollment) to 3,475 (24% of total undergraduate enrollment), and once enrolled, women at Georgia Tech graduate at a higher and faster rate than men. The overall six-year graduation rate for women in engineering, our largest STEM area, was 87.8% in 2012-13 (for the 2007 cohort), compared to an 80.3% graduation rate for men in engineering. See Appendix F for a five-year history of STEM enrollment by gender. Appendix G shows a five-year history of graduation rates in the College of Engineering by gender.

Another significant opportunity for STEM growth involves recruiting more underrepresented minorities and students with disabilities. Along with the University of Georgia and Georgia Perimeter College, Georgia Tech is the recipient of BreakThru, a five-year NSF award that fosters the entry and retention of students with disabilities into STEM.

The Georgia Tech College of Engineering oversees an array of outreach activities that are specifically designed to attract K-12 minority students. The Center for Education Integrating Science, Mathematics, and Computing (CEISMC) conducts a comprehensive summer program to expose K-12 students to STEM topics and careers. Appendix H provides a list of the institute's STEM outreach efforts.

Through Georgia Tech's co-op program, 1,910 individual semester-long work terms were completed by undergraduates in academic year 2012-13. Of this total, 1,812 of the positions were in engineering or computing, and 80% were in the state of Georgia. Additionally, in 2012-13, 926 semester-long internships were completed, which included 767 positions in

engineering or computing. The co-op/internship program provides in-depth access to STEM opportunities for our students and strengthens their motivation to stay on course to graduation.

While Georgia Tech does not have an education major, our pre-teaching efforts involve partnerships across the state to assist our students who desire to become K-12 STEM teachers. For fall 2014, 60 students who were offered admission to Georgia Tech have expressed an interest in pre-teaching assistance. The pre-teaching advisor will provide direct outreach to interested students who matriculate to assist them with their career plans. Pre-teaching internships are underway at Centennial Place Elementary School and at Grady High School. In addition to K-12 outreach for students, CEISMC has designed and implemented teacher professional learning initiatives for over 20 years. For details on CEISMC's Teacher Education Partnerships, see https://www.ceismc.gatech.edu/tep/initiatives.

The interim measure of success for this strategy involves the number of students enrolled in STEM majors at Georgia Tech. The final measure of success can be seen in the increase in the number of STEM degrees conferred during the past five years. In fall 2013, 11,701 undergraduates were enrolled in STEM majors. This figure represents a 17% increase in STEM enrollment over the past five years. Also in the past five years, a total of 10,846 undergraduate STEM degrees were earned. The number of STEM degrees earned in 2012-2013 was 3,122, which represents a 16.9% increase in the number of STEM degrees conferred since 2008-2009. See Appendix I for complete outcome metrics.

Strategy III - Provide advising and programming to promote student success and ensure that interventions are provided for students who are off track academically. (Goal 4)

Georgia Tech identifies students who are off-track in a given semester with Midterm Progress Reports (MPRs). Submitted after 40 percent of the term has been completed, MPR's allow faculty of 1000- and 2000-level courses to assess student performance with a grade of S or U. The grades are intended to alert students to problems with their performance while there is still time to recover; these grades do not affect GPAs or become a permanent part of the transcript. An automated report identifies all students, by major, who have received one or more U's. A grade of S indicates satisfactory work, usually understood to be performance at a C level or higher. A grade of U indicates unsatisfactory work, usually understood to be performance at a D level or lower. However, faculty may report a U to indicate any concerns about a student's performance, even if his or her grades are strong (e.g., to alert a student who may have good homework grades but poor class attendance). Academic Advising guidelines stipulate that freshmen with three or more midterm U's must meet with an advisor or staff member in the Center for Academic Success (CAS), but in practice most major advisors require meetings with students with two or more midterm U's. In future semesters, we will require at the institute level that all freshmen with two or midterm U's meet with an advisor or a CAS staff member. In fall 2013, 56 freshmen with three or more U's were reported by faculty at mid-term. The majority of these students received advisement within four weeks, and ultimately 52 students (93%) participated in advisement.

To further improve resources and tools available to academic advisors, Georgia Tech has purchased GradesFirst, an advisor workflow and analytics software package, to help identify at-risk students, manage messaging to students, track meetings, and measure the effectiveness of advising and other academic interventions. GradesFirst will be implemented in spring 2015.

Georgia Tech's Center for Academic Success (CAS) provides a range of resources for students who need additional support. 1-to-1 Tutoring supplies free, appointment-based peer tutoring sessions for students in more than 70 courses, especially 1000- and 2000-level STEM courses. "Reboot" offers weekly academic recovery workshops and coaching sessions to students who are not meeting their own academic expectations. GT 2100 is a new credit-bearing, one-hour "Seminar on Academic Success" that is mandatory for students returning from academic dismissal and which offers opportunities for reflection, skill development, and one-on-one academic coaching. The course was established specifically in relation to Tech's CCG goals to provide increasing support for students who are not achieving academically as anticipated. "Success Summit" is a half-day series of workshops and panels for students on academic probation. Academic Coaching allows students to work with professionals in CAS to establish goals, find motivation, and troubleshoot behaviors that prevent student success. During the 2013-14 academic year, CAS delivered 443 Academic Coaching sessions. In spring 2014, we saw an increase of 57% in the total number of coaching usage from spring 2013 and a record 107 students using the service.

GT 2100, "Seminar on Academic Success," is a key intervention for students returning on contract from academic dismissal. In spring 2014, 27 students registered for the inaugural GT 2100 section. Of the original cohort, 19 (70.4%) have graduated or are on-track to meet degree requirements, and 8 (29.6%) have been dismissed for failure to meet the terms of their contracts. We will continue to monitor the persistence and graduation rates of these students and of subsequent GT 2100 cohorts.

Reboot is a voluntary study skills seminar that meets weekly to help students identify long- and short-term goals, tap into motivation, and practice specific study skills. Of the original 9 students who registered for the program, 6 (66.7%) improved their academic standing or remained in good academic standing, and 7 (77.8%) of the original 9 remain at Georgia.

In spring 2014, we changed Reboot to a six-week format. Of 31 participants in spring 2014, 17 (54.8%) improved their academic standing or remained in good academic standing during the Reboot term, 9 (29%) remained in or fell to less than good academic standing (warning or probation), and 5 (16.1%) were academically dismissed. Currently, 25 (80.7%) of the original 31 are still pursuing degrees at Georgia Tech, 5 (16.1%) have been academically dismissed, and 1 (3.2%) left Georgia Tech under probation. The 80.7% two-semester persistence rate for students in Reboot demonstrates the success of this intervention.

A newly-created full-time position, Retention and Graduation Coordinator, was filled in April 2014. This position reports jointly to the Associate Vice Provost for Undergraduate Education and the Registrar and is

responsible for helping to move our retention and graduation initiatives forward. One of several activities associated with this position involves an annual survey of students who did not register for fall semester during Phase I. Historically, it has been observed that not registering for classes during Phase I may be a "red flag" for a student who may not be returning or who may be experiencing a barrier to returning. Direct outreach is being conducted with the respondents for fall 2014 to help each student remove, whenever possible, barriers to returning. The outreach involves coordination with Financial Aid, academic advisors, the Center for Academic Success, Center for Career Discovery and Development, and the Registrar's Office. At the conclusion of the survey, responses will be analyzed to identify potential areas for institutional improvement.

An annual survey of non-returning students (defined by students who have not been enrolled for two or more semesters) will be institutionalized in order to help identify reasons that students in good academic standing have not returned to Georgia Tech. The institute's 2013 survey of non-returning students was coordinated by the Office of Assessment and the Office of Undergraduate Education. The primary reasons students cited for leaving included financial issues, desired majors not offered at Georgia Tech, required military service, job acceptance, and personal or health reasons. The Vice Provost for Enrollment Services made personal phone calls to 39 students who indicated they would like to return to Tech in order to discuss their future plans. The survey results have created a greater awareness of the need for faculty and staff to refer students to Financial Aid, the Counseling Center, the Dean of Students, and the Center for Career Discovery and Development. Georgia Tech is currently producing videos about various majors to improve student awareness of potential alternatives to transferring to another institution. The next survey of non-returning students will take place during fall 2014.

Strategy IV - Implement alternative delivery models including online courses, supplemental instruction, and flipped classrooms. (Goal 8)

Georgia Tech provides Peer-Led Undergraduate Study (i.e., supplemental instruction) to students in traditionally challenging courses such as Calculus I, II, and III, and ISYE 2027 (Probability) through the Center for Academic Success (CAS). In fall 2013, CAS expanded those offerings to include a pilot program for Physics 2212 courses. In total for the PLUS program, CAS served 1,733 students in 7,448 visits during fall 2013 and 1,838 students in 5,935 visits during spring 2014. In the coming year, we plan to track the number of students who successfully complete the courses for which they received supplemental instruction compared to matched peers.

The Physics pilot had the benefit of securing faculty buy-in for an expanded program for all Physics 2211 and 2212 sections, including blended sections (i.e., hybrid courses with some lecture and some flipped class meetings). The Center for Academic Success applied for and received a Complete College Georgia Innovation Grant to support PLUS sections for all Physics 2211 and 2212 sections for AY 2014-15.

Flipped and blended classrooms have extended across many disciplines at Georgia Tech. The breadth of resources available to help instructors design and assess alternative forms of instructional delivery include the Center for Teaching and Learning (CETL), the Center for 21st Century Universities (C21U), and Georgia Tech Professional Education (GTPE).

The Summer Online Undergraduate Program (SOUP) offers opportunities for students to take online classes during summer semesters. These online options are especially helpful for allowing co-ops and interns to progress toward graduation during their work terms and for students who may otherwise not study during summers. In summer 2013, 112 students completed 12 online classes. Due in part to a marketing campaign and an increased awareness of online options, in summer 2014, 248 students registered for 15 online classes (a 121% increase in student enrollment). Consideration is being given to offering on-line undergraduate courses in fall and spring semesters, as well. See Appendix J for select program metrics.

Strategy V - Provide high-impact curricular and co-curricular opportunities to enhance academic development. (Related goal: Other)

Along with the risk modeling approach implicit in Strategies I and III, Georgia Tech employs an impact modeling approach by providing a range of curricular and co-curricular offerings designed to enhance the undergraduate experience. According to the Association of American Colleges and Universities, these teaching and learning practices have been widely tested and found to have a positive impact on student retention and engagement. Along with a freshman seminar class (GT 1000), which assists students with adjusting to and succeeding at Georgia Tech, the Office of New Student and Sophomore Programs fosters the successful transition and engagement of new and continuing students with a special emphasis on the retention of second-year students. Senior capstone courses are project based and help to integrate the body of knowledge gained throughout previous course work. Additional enhanced forms of education at Georgia Tech include:

- Undergraduate research
- Global learning through study and work abroad programs
- Living/learning communities
- Experiential education (co-op/internship program)

These academic enrichment programs have shown positive correlations with GPA's and graduation rates (Appendix K). Average GPA's for participants in these programs ranged from 3.24 to 3.28 for the 2002-2007 cohorts (average GPA for all students for 2002-2007 was 2.94). Six-year graduation rates for the same cohorts ranged from 94 to 97%. We will continue to observe GPA and graduation outcomes for students involved in these optional, high-impact programs.

The Center for Academic Enrichment oversees the coordination of the Undergraduate Research Opportunities Program (UROP). Undergraduate research is a key complement to the mission of Georgia Tech. Research—a catalyst for innovation—sparks critical thinking and creativity, builds on teamwork skills, fosters relationships between students and faculty, and solves real-world problems. In AY 2012-13, 2,321 students participated in undergraduate research, and in AY 2013-14, 2,586 participated. The six-year graduation rates for the 2007 cohort

of students participating in UROP was 96%.

The Office of International Education provides opportunities for students to become more globally competent through study abroad options and global internships. In 2012-13, 1,547 students studied or worked abroad in 68 different countries. In 2013-14, 1,816 students studied or worked abroad in 57 different countries. The six-year graduation rate for the 2007 cohort of students who studied abroad was 97%.

The Grand Challenges Program, a living-learning community for incoming freshmen, helps students develop leadership, teambuilding, and analytical skills not taught in traditional classes. In this program, students live together in a residence hall and engage with faculty from a variety of disciplines. The students also take one academic class per semester together and, in groups of eight to ten mentored by a faculty member, develop a proposal for a potential solution to a real-world problem. The 110 Grand Challenges participants in 2012-13 experienced a first-to-second year retention rate of 100%. The 110 Grand Challenges participants in 2013-2014 experienced a retention rate of 99%. Of the total 220 Grand Challenges participants (2012 and 2013 cohorts) 98% have been retained. See Appendix L for GPA outcomes.

Co-ops and internships provide students with in-depth, major-related learning experiences through paid positions with our industry and government partners. A in-depth study of the graduation rates for 2004-2006 cohorts who co-oped or interned revealed that these participants had a six-year graduation rate of 94.2% compared to a six-year rate of 73.3% for non-participants. For underrepresented minorities who co-oped or interned, the difference was even more dramatic: the six-year graduation rate was 92.7% compared to a 67.3% six-year rate for non-participants. The overall six-year graduation rate for the 2007 cohort of students who co-oped was 92%. The six-year graduation rate for the 2007 cohort of students who interned was 97%. Co-op and internship experiences help students to confirm their major (thus reducing unnecessary course work), apply classroom theory, improve self-efficacy, and prepare for seamless entry into the workforce. Over 90% of Georgia Tech's co-ops and interns work in engineering or computing positions. The co-op/internship program helps employers to meet short-term STEM needs, while preparing students for STEM careers upon graduation. See Appendix M for additional information on the correlation between co-oping/interning and graduation rates.

OBSERVATIONS

Over the past 13 years, Georgia Tech has achieved an increase in retention and graduation rates. The percentage of first-time, full-time freshman students returning for their second year rose from 90% for the 1999 cohort to 96% for the 2012 cohort. Four-, five- and six-year graduation rates have increased over the same time frame, with six-year graduation rates rising from 76% for the fall 1999 cohort to the historic rate of 82% for the fall 2007 cohort group. High retention rates for third-year (91%) and sixth-year (84%) were maintained for the 2011 and 2008 cohorts, respectively. Historic fourth-year (90%) and fifth-year (87%) retention rates were observed for the 2010 and 2009 cohorts, respectively.

Plans to identify and monitor veterans, students with disabilities, adult learners, and first generation students have been implemented, and RPG studies that include these populations will be possible in the near future. We continue to seek out areas for improvement and aspire eventually to achieve a six-year completion rate of 84%.

Time and resources have not allowed us to pursue every activity or metric detailed in the original CCG plan. For example, we have not yet created a formal transcript monitoring process for identifying students who may be "at risk" for leaving Georgia Tech, nor have we yet analyzed the graduation rates of students who participated in grade replacement.[1] We have not to date fully analyzed persistence outcomes for students served by the Office of New Student and Sophomore Programs or for the PLUS students in the Center for Academic Success. Also, we have not yet offered DegreeWorks information sessions for students. We still intend to pursue these activities, as well as to gain a better understanding of the issues faced by students with 90+ semester hours who do not complete their degrees. Improved metrics and better methods for identifying students with multiple risk factors will be essential to our RPG efforts.

We are encouraged by the progress of students enrolled in the Center for Academic Success GT 2100 and Reboot programs and plan to expand the center's offerings to reach a larger number of students. For example, due to the success of students taking GT 2100 after returning from academic dismissal, a GT210X course with accompanying academic coaching is being considered for students who are on academic probation or warning. The advising of students with two or more mid-term U's, implemented in fall 2014, is a step beyond requiring academic advising for students with three or more U's at mid-term. Our objective is to reach students experiencing academic difficulty as early as possible—while they still have time to recover academically.

Another key observation is that 92.7% of underrepresented minorities (URM's) who co-op or intern at least one semester graduate within six years compared to a 67.3% rate for those who do not co-op or intern. This information is being used for marketing experiential learning to our URM's through OMED and beyond in order to encourage wider participation. It would be useful to observe if we have similar high graduation rates for URM's participating in our other high-impact curricular and co-curricular programs.

The success of our Grand Challenges living/learning community has resulted in plans to expand such communities over the next several years.

The CCG-GT Steering Committee (see Appendix N for a list of members) is comprised of individuals in high-level roles who meet on a regular basis to monitor the progress of our initiatives. In response to an identified need to bridge retention efforts across campus (from Enrollment Services to Undergraduate Education to Student Affairs), a full-time Retention and Graduation Coordinator position was created in spring 2014. This coordinator serves as a clearinghouse for institute-wide retention efforts and assists with moving initiatives forward.

In our continued focus on student success, we are employing both risk modeling and impact modeling

[1] First-time freshman students who receive a grade of D or F in a course within their first two terms in residence (first three terms for those who begin in the Freshman Summer Session) are eligible to repeat the course and have the original grade excluded from the computation of the academic average. Grade substitution may be used only once per course, with a maximum of two courses total.

approaches. Strategies span the range from macro-level programs to micro-level interventions. By concentrating our efforts on the strategies described in this document, we anticipate high completion rates and deep learning experiences for our students