The University of North Carolina

Undergraduate Retention & Graduation Report

2014-15



The University of North Carolina General Administration

April 2016

# **Executive Summary**

Undergraduate student retention and graduation are important indicators of success at institutions of higher education, but are not the only ones. Included in this report are various student success measures to aid in comparison and evaluation of UNC institutions to national, state, and UNC groups over time.

- All UNC institutions exceeded national averages in retention and graduation rates and the rates below present comparisons to the prior year.<sup>1</sup>
  - The UNC retention rate remained relatively flat at 87%.
  - The 4-year graduation rate is up almost two percentage points to 44%.
  - The 5-year graduation rate is up over one percentage point to 63%.
  - The 6-year graduation rate is remained relatively flat at 67%.
- Analysis of UNC 6-year graduation rates for populations of interest show the following:
  - Underrepresented minority students graduate at lower rates than their counterparts of other races, 55% compared to 72%, respectively.
  - UNC's low income students graduate at lower rates than higher income students, 60% compared to 72%, respectively.
  - Male students graduate at lower rates compared to their female colleagues, 63% compared to 71%, respectively.
  - When comparing graduating groups to the North Carolina general population, American Indian, Black/African American, and Hispanic students are underrepresented in the 2014-15 graduating class.
- UNC also employs alternative measures to examine student success.
  - Analysis suggests that most UNC institutions have actual graduation rates indistinguishable from predicted graduation rates after accounting for institutional differences among students.
  - The more inclusive VSA success metric indicates that a greater number of students are successful when compared to traditional metrics of success.
  - Transfer students graduate at lower rates when compared to native UNC juniors, 68% compared to 85%, respectively.
  - When counting average semesters-to-graduation (not amount of time passed), the average number of semesters in which students are enrolled is slightly more than eight.
  - Across UNC, the number of bachelor's degrees per 100 full-time equivalent undergraduates is 20.9, a slight decrease over the previous year (-0.1).
  - The average attempted hours to degree, or the total number of credits in which both the student and the State of North Carolina has invested, is 139.2, which is 0.9 credit hours lower than the previous year.

<sup>&</sup>lt;sup>1</sup> Data presented represents the system-wide weighted rates. The most recent cohorts used: retention rate (Fall 2014) at any UNC institution; 4-, 5- and 6- year graduation rates use the 2011, 2010 and 2009 cohorts, respectively, for graduation at any UNC institution.

# Introduction

Commonly used measures of student success utilize indicators from the US Department of Education's Integrated Postsecondary Education Data System (IPEDS) for first-time, full-time (FTFT) freshmen who enter in the fall semester. Their widespread use enables institutions to benchmark student achievement against national trends and peer institutions.<sup>2</sup> In spite of the frequent use of these data, IPEDS excludes transfer students, part-time students, and students entering in the spring semester. These excluded students represent slightly more than one-third (33.5%) of the 2015 UNC undergraduate student population. Additionally, the IPEDS metric gives no credit to the institution from which a student first enrolled if a student transfers and graduates at another institution.

Because of the significant impact transfer and part-time students have at all UNC institutions, UNC General Administration (UNC-GA) reports alternative measures of success to the UNC Board of Governors (BOG) and the public in its annual Retention and Graduation report. These six additional metrics used to review student success include the following.

- 1. A comparison of predicted graduation rates with actual graduation rates, which accounts for institutional differences and student's incoming differences.
- 2. A measure of student success for students that move among institutions in North Carolina and across the country from the publicly available Voluntary System of Accountability (VSA).
- 3. Graduation rates for UNC transfer students.
- 4. Evaluating the actual number of semesters in which a student enrolls en route to graduation, as opposed to the number of years passed between initial enrollment and graduation.
- 5. Institutional degree efficiency looks at degree production relative to the average undergraduate full-time equivalent enrollment.
- 6. Average attempted hours to degree looks at the total number of credits in which both the student and the State of North Carolina have invested.

The body of this report focuses on system-level graduation and retention rates with campus-level and corresponding peer benchmarks provided in Appendix A.<sup>3</sup> Where possible, corresponding national rates are reported as well. In nearly all measures, UNC surpasses the national rates for other public institutions.

In addition to the overall graduation rates, this report examines variations in graduation rates by race, Pell grant status (a proxy used to indicate low income), and gender.<sup>4</sup> Additionally, age groups are combined with race to compare racial representation in UNC graduates to the general North Carolina population.

<sup>&</sup>lt;sup>2</sup> National rates are from the National Center for Education Statistics 2015 Digest of Education Statistics, Table 326.10 (Available: <u>http://nces.ed.gov/programs/digest/d15/tables/dt15\_326.10.asp?current=yes</u>)

<sup>&</sup>lt;sup>3</sup>Peers are calculated using institutional-level peers approved by the BOG in 2011.

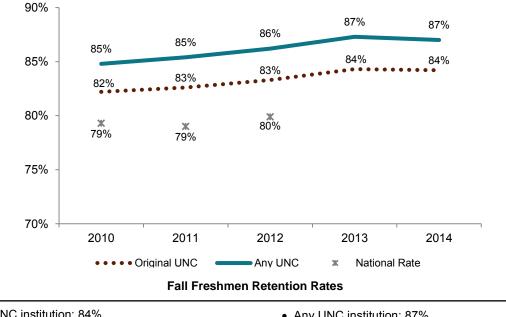
<sup>&</sup>lt;sup>4</sup> The category "gender" used in this report is consistent with how data is reported to the federal government/IPEDS.

The majority of the data used in the report were collected from the publicly-available UNC-GA's Data Dashboards, which were created to increase transparency and share information with UNC's various constituencies. The dashboards can be accessed here: <a href="http://www.northcarolina.edu/infocenter#interactiveData">www.northcarolina.edu/infocenter#interactiveData</a>. The dashboards used for this report include Enrollment, Student Success, Transfer Students, and Degrees and readers are encouraged to browse these dashboards for additional content. As data on the dashboard are dynamic, they do not reflect points in time as does the data in this report; therefore, there may be slight variations between data in this report and the dashboards going forward.

# **Retention Rates**

The IPEDS freshman-to-sophomore retention rate is the percentage of an institution's first-time, full-time (FTFT), fall-entering undergraduate students who continue at that institution the next fall semester. Over five years, IPEDS retention rates have increased 2 percentage points (pp), from 82% to 84% for students returning to their original UNC institutions. Broadening the analysis to include students returning to any of the UNC institutions, the Fall 2015 retention rate goes up to 87%. Retention rates are displayed in Figure 1 below.

Figure 1: Retention Rates of UNC First-Time, Full-Time Freshmen, Fall 2010 through Fall 2014 Cohorts<sup>5</sup>



<ul> <li>Original UNC institution: 84%</li> </ul>	Any UNC institution: 87%
<ul> <li>One-year change: slight decrease (&lt;1%)</li> <li>Five-year change: +2 percentage points</li> </ul>	<ul> <li>One-year change: slight decrease (&lt;1%)</li> <li>Five-year change: +2 percentage points</li> </ul>

National Public Institution Rate: 80% (2012 cohort)

<sup>5</sup> Sources: Retention Rates, <u>http://old.northcarolina.edu/ira/ir/analytics/retgrper.htm</u> &

http://nces.ed.gov/programs/digest/d14/tables/dt14\_326.30.asp. Please note that these numbers are rounded, which masks some of the specific changes in the data. See Appendix A for the expanded numbers.

# Four-, Five-, and Six-Year Undergraduate Graduation Rates

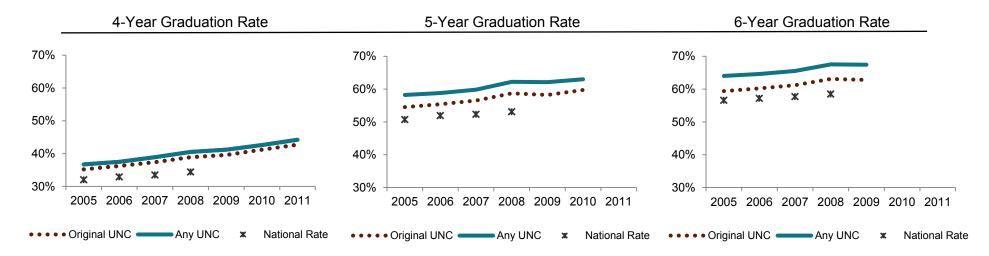
Tracking the graduation rate of first-time, full-time fall-entering cohorts (FTFT) over time yields further understanding of the progress made on degree attainment. The UNC systemwide 6-year graduation rate at students' original UNC institutions has increased three pp over five years to almost 63%. As previously mentioned, this metric excludes transfer students, parttime students, and students entering in the spring semester; yet nearly 40% of all UNC graduates in the 2014-15 graduating class did not begin as first-time, full-time students. For some institutions, this point is particularly salient; at FSU, nearly 71% of their 2014-15 graduates come from these non-traditional student populations. An additional seven institutions have over 45% of their graduating class excluded from the IPEDS graduation measures.<sup>6</sup>

In an attempt to capture more students, UNC-GA broadens the analysis to include not only students who graduate from their original UNC institution, but also those who started at one UNC institution and graduated from another.<sup>7</sup> When viewing the data this way, the 6-year graduation rate rises to over 67%. The UNC system-wide graduation rate is higher than the national rate of other public institutions by a wide margin. See Figure 2 for additional details on the 4-, 5-, and 6-year graduation rates. Institutional-level statistics on graduation and retention are available in Appendix A.

It is important to note that the 6-year graduation rate is inclusive of students who graduate within four and five years, meaning not all graduates reflected in the 6-year rate take the full six years to graduate. Of those who graduated within six years, over 61% did so within four years and 92% completed within five years.

To understand the factors that contribute to lengthened time to graduation, UNC conducts a Graduating Senior Survey every three years. As is commonly found in the graduation rate literature, UNC graduating seniors indicated that a number of circumstances related to their personal lives have interfered with their studies and delayed their earning a degree within four years: the 2013 survey data shows that the most frequently-cited response to delayed graduation was "personal reasons".

<sup>&</sup>lt;sup>6</sup> The seven additional institutions with greater than 45% of their 2014-15 graduating class not part of the traditional IPEDS graduation measures are: WSSU (66%), UNCC (53%), WCU (50%), UNCP (49%), UNCG (48%), UNCA (47%), and UNCW (45%). <sup>7</sup> Throughout the report, for both retention and graduation data, this is labeled: "Any UNC Institution".



# Figure 2: Four-, Five-, and Six-Year Graduation Rates for the UNC System

Graduate Within 4 Years	Graduate Within 5 Years	Graduate Within 6 Years
Original UNC Institution: 43% <ul> <li>One-year change: +2 pp</li> <li>Five-year change: +5 pp</li> </ul>	Original UNC Institution: 60% <ul> <li>One-year change: +1 pp</li> <li>Five-year change: +4 pp</li> </ul>	<ul> <li>Original UNC Institution: 63%</li> <li>One-year change: slight decrease (&lt;1%)</li> <li>Five-year change: +3 pp</li> </ul>
Any UNC Institution: 44% • One-year change: +2 pp • Five-year change: +5 pp	Any UNC Institution: 63% <ul> <li>One-year change: +1 pp</li> <li>Five-year change: +4 pp</li> </ul>	Any UNC Institution: 67% <ul> <li>One-year change: slight decrease (&lt;1%)</li> <li>Five-year change: +3 pp</li> </ul>
National Public Institutions Rate: 34%	National Public Institutions Rate: 53%	National Public Institutions Rate: 59%

# Improving Graduation Rates

In 2008, the Board revised UNC Policy 700.1.1 to incrementally increase admission standards over a five-year period. Beginning in Fall 2009, the minimum SAT/ACT scores and minimum high school GPA scores began to increase slightly, culminating in the current standard of a weighted 2.5 high school GPA and a combined SAT score of 800 or a composite ACT score of 17. The full impact of increased admission standards on the 4-, 5- and 6-year graduation rates will not be realized until the graduating classes of 2017, 2018 and 2019, respectively.

Though the precise effect of the policy change will not be known for a few more years, analysis of the most recent graduating class excluding students whose high school GPA was less than a 2.5 GPA suggests the projected impact of the BOG policy changes is an increase of nearly two pp in the 6-year graduation rate at any UNC institution.<sup>8</sup> The five UNC constituent institutions with the lowest 6-year graduation rates (below 50%) at any UNC institution may see an average increase of nearly four pp, moving from an average 44% to 48%.<sup>9</sup> Of special note, these five institutions comprise only 16% of the total undergraduate headcount for the UNC system. Further, when accounting for student characteristics (inputs) two of the five institutions perform statistically better than their predicted graduation rate and none fall statistically below (see Alternative Measures of Success later in the report).

Restricting access is not the only way to increase graduation rates. The UNC system has been working diligently to streamline curriculum, provide wrap-around services, and improve advising. Examples of system-wide efforts include implementation of UNC BOG Policy 400.1.5 and Regulation 400.1.5[R] "Fostering Undergraduate Student Success," course redesign for gateway courses, early warning systems, and other high impact practices. These and other interventions are being monitored to determine their efficacy and UNC will make investments and adjustments as needed to continue striving for increased student success.

# Graduation Rates for Populations of Interest

In reviewing graduation rates, it can be difficult to assess how different student groups are performing when speaking about success measures for the entire system. In order to review data more comprehensively, the graduation rates for underrepresented minority students (URM's), Pell grant recipients (a proxy for low-income), and gender are presented. Importantly, these data are only descriptive and do not take into account other important factors that influence graduation rates, such as ability or motivation. In addition to these descriptive statistics, a final metric is presented to compare the composition of the most recent UNC graduating class to the general North Carolina population by race/ethnicity and age.

<sup>&</sup>lt;sup>8</sup> From UNC-GA's data files: "z086\_RetentionGraduation\_with\_H" <sup>9</sup> Ibid.

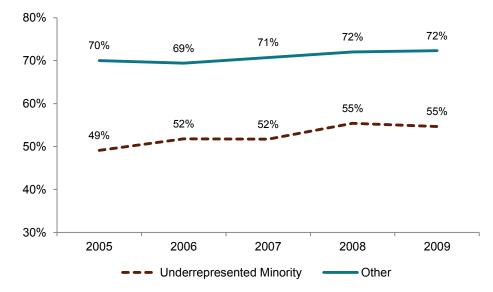
Graduation Rates by Underrepresented Minority Status

There are a number of efforts underway nationwide aimed at improving the graduation rates of racial and ethnic minorities that have traditionally been underrepresented in higher education. In many publications and discussions on this topic, Black/African American, Hispanic/Latino, and American Indian students are grouped together and commonly termed "underrepresented minority" (URM) as a means to compare these students against other races/ethnicities: the same is done in this report.

A recent report indicated that while graduation rates have increased at many institutions across the country, the gap between white and URM students at some public universities is actually increasing.<sup>10</sup> In said report, researchers found that while many institutions across the country did see gains for URM students, the overall completion gap between URM and white students narrowed by less than one percentage point in ten years. While there certainly are variations in URM educational attainment across the country, examining this metric for UNC institutions is particularly salient at a time when North Carolina's demographics are changing rapidly.

To better understand URM graduation rates at UNC institutions, Black/African American, Hispanic/Latino, and American Indian students are combined to compare the 6-year graduate rate of URMs with those of all other races/ethnicities in Figure 3.<sup>11</sup>

Figure 3. Six-Year Graduation Rates of First-Time, Full-Time Freshmen, at Any UNC Institution, Fall 2005 through Fall 2009 Cohorts by Underrepresented Minority Status



Source: UNC-GA data file z099\_gradrates\_race\_age\_v2

<sup>10</sup> Eberle-Sudre, Kimberlee, Welch, Meredith, and Nichols, Andrew. (2015). Rising Tide: Do College Grad Rate Gains Benefit All Students? Retrieved from: <u>https://edtrust.org/resource/rising-tide/</u>.

<sup>&</sup>lt;sup>11</sup> Other: Asian, White, Native Hawaiian, Nonresident Alien, Two or More Races, and Unknown.

Across the five years for which data was examined, URM students, on average, represented 23% of the graduating class and the Other students accounted for approximately 77%. As can be seen above, racial and ethnic groups in the "Other" category graduate at a higher rate than URMs. The achievement gap between these two groups has shrunk four percentage points in the last five years from a 21 percentage point gap to a 17 percentage point gap. Data for Figure 3 can be found in Appendix B.

# Graduation Rates by Pell Grant Status

Studies show that students from higher-income families and students whose parents have four-year college degrees are more likely than others to earn bachelor's degrees within six years.<sup>12</sup> In 2013, 77% of adults from families in the top income quartile earned at least a bachelor degree by the time they turned 24 (up from 40% in 1970), but only 9% of people from the lowest income bracket earned the same (up from 6% in 1970).<sup>13</sup>

Researchers often use the receipt of the Federal Pell Grant to identify low-income students. To qualify for a Pell Grant, parental adjusted gross income must be \$49,999 or less.<sup>14</sup> To qualify for the full 2014-15 Pell Grant award (\$5,730), family income must be \$24,000 or less.<sup>15</sup> Over 76,000 UNC undergraduates who were enrolled in Fall 2014 received a Pell Grant at some point during their academic careers.<sup>16</sup> Over 37,000 UNC students who were enrolled in Fall 2014, or roughly 21% of the total undergraduate population, received the full Pell award at some point during their academic careers: meaning that their parental income was under \$24,000 per year. At the following UNC institutions, more than half of all bachelor-seeking students have received a full or partial Pell Grant at some point during their education: ECSU (82%); NCCU (77%); FSU (74%); NCAT (71%); WSSU (67%); UNCP (66%); and UNCG (54%).

When looking at the UNC graduation rates for FTFT students by Pell Grant status, non-Pell grant recipients graduated at higher rates, 12 pp higher for the most recent year, than those that did receive Pell Grants. This holds true across multiple years and data since 2005 are shown on the next page. Figure 4 on the next page shows the 6-year graduation rates for students who did and did not receive a Pell Grant. The 2005 cohort saw a 15 pp gap between these two groups and the 2009 cohort saw a 12 pp gap. Data for Figure 4 can be found in Appendix C.

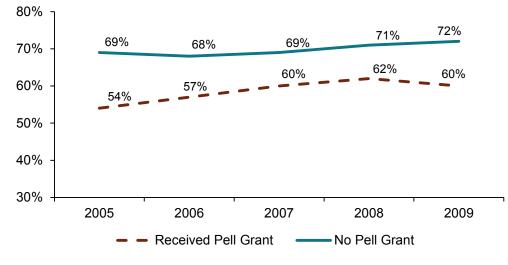
<sup>&</sup>lt;sup>12</sup> Cahalan, M., & Perna, L. W. (2015). Indicators of higher education equity in the United States: 45-year trend report. Washington, DC: The Pell Institute and Penn AHEAD. <sup>13</sup> Ibid.

<sup>&</sup>lt;sup>14</sup> <u>https://ifap.ed.gov/efcformulaguide/attachments/090214EFCFormulaGuide1415.pdf</u>. The 2014-15 data is used here in this example as that is the most recent year for which UNC-GA has student financial data. <sup>15</sup> https://www2.ed.gov/about/overview/budget/budget16/justifications/p-sfa.pdf, see page 14

<sup>&</sup>lt;sup>16</sup> Fall 2014 data are the most current data available for financial aid information. Data retrieved from UNC-GA file:

z110 pell status. This includes all students (first-time, full-time; transfer; spring entrants; part-time) who received a Pell Grant at any point in their academic careers who were enrolled in Fall 2014.

Figure 4: Six-Year Graduation Rates of First-Time, Full-Time Freshmen, at Any UNC Institution, Fall 2005 through Fall 2009 Cohorts by Pell Grant Status

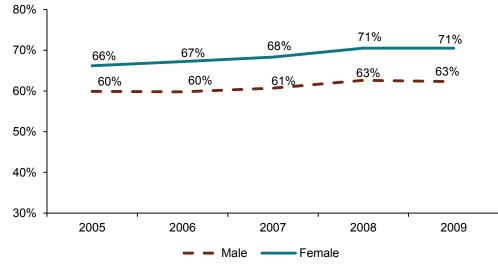


Source: UNC-GA data file z099\_gradrates\_pell

#### Graduation Rates by Gender

Graduation rates differ not only by race/ethnicity and income but also by gender. Females at UNC institutions enroll at higher rates (57% compared to 43%) and graduate at higher rates when compared to their male counterparts (71% compared to 63%). See Figure 5 below for graduation rates by gender (data available in Appendix D).

Figure 5: Six-Year Graduation Rates of First-Time, Full-Time Freshmen, at Any UNC Institution, Fall 2005 through Fall 2009 Cohorts by Gender



Source: UNC-GA data file z099\_gradrates\_gender

# Graduation Rates by Gender and STEM

Although women enroll and graduate at higher rates, there remain wide disparities across some academic fields, including fewer women graduating with STEM degrees. The proportion of female graduates with a STEM baccalaureate degree in 2014-15 was 16%, compared to 31% of male graduates. This proportion has remained relatively stable over the past ten years, with female undergraduate STEM degree recipients representing between 14% and 16% of all female degree recipients and male undergraduate STEM degree recipients representing between 28% and 31% of all male degree recipients.<sup>17</sup>

# Graduation Rates by Gender and Race

An additional analysis of gender differences in graduation rates examines the attainment gap between females and males of different racial/ethnic groups. Figure 6 shows the 6-year graduation rate for Asian, Black/African American, Hispanic, and White females and males for two cohorts ten years apart: Fall 2000 and Fall 2009. As seen in Figure 6 on the next page, females have higher graduation rates than males across all cohorts and all races/ethnicities. While the gender gap has increased across ten years for Asians and stayed the same for Whites, Black/African American and Hispanic males have improved their graduation rates compared to their female counterparts (but still graduate at lower rates).

As females in general enroll at higher rates than males, looking at only the graduate rates by gender and race/ethnicity miss important aspects of this discussion: there simply are not as many males of certain racial groups enrolling as their female counterparts. The enrollment gap between females and males is greatest for Black/African American students (column N in Figure 6 is the number in the cohort), with approximately 36% fewer males enrolling in Fall 2009.

<sup>&</sup>lt;sup>17</sup> Data for this comparison is found in UNC-GA data file: z108\_STEM\_Graduates

Figure 6: Six-Year Graduation Rates of First-Time, Full-Time Freshmen, at Any UNC Institution, Fall 2000 through Fall 2009 Cohorts, by Gender and Race/Ethnicity<sup>18</sup>

					Percentage Point Gap Between
	Fem	ale	Ma	le	Female/Male
Asian	Ν	%	Ν	%	
Fall 2000 cohort	370	75	361	70	5%
Fall 2009 cohort	488	80	481	72	8%
	Fem	ale	Ma	le	
Black/African American	Ν	%	Ν	%	
Fall 2000 cohort	3,616	58	2,243	43	15%
Fall 2009 cohort	4,779	57	3,072	46	11%
	Fem	ale	Ma	le	
Hispanic	Ν	%	Ν	%	
Fall 2000 cohort	212	65	152	45	20%
Fall 2009 cohort	663	71	549	62	9%
	Fem	ale	Ma	le	
White	Ν	%	Ν	%	
Fall 2000 cohort	9,698	72	7,691	64	8%
Fall 2009 cohort	10,602	77	8,907	69	8%

Source: UNC-GA data file z099 gradrates gender race

# Graduation Rates for Age Groups and Race/Ethnic Categories

One additional mode of comparison is to look at the UNC student graduation rate by race/ethnicity and age. Breaking the graduation rates out by age groups allows the comparison with numbers from the US Census for North Carolina to see the representativeness of UNC graduating classes are when compared with the North Carolina general population.<sup>19</sup> Only the age groups representing the vast majority of UNC students are used and compared to US Census data (92% of all graduates—full-time, part-time, and transfer—in the 2014-15 graduating class are between the ages of 18 and 34).<sup>20</sup>

<sup>&</sup>lt;sup>18</sup> The numbers presented for each cohort and gender in column N reflects the total number of undergraduate students in that particular cohort. <sup>19</sup> Comparisons are made using the US Census, 2010: www.census.gov/2010census/data/.

<sup>&</sup>lt;sup>20</sup> For this comparison, four racial/ethnic categories are left out. Hawaiian and Pacific Islander is left out due to its small numbers in both sources. Two or more races and Unknown are left out due to the inconsistent uses of the categories at UNC institutions and in the Census. Non-resident Alien is excluded because that is not a category captured by the Census. For the 2014-15 academic year, this removes 2,573 students from the calculation. The age

This analysis looks at the most recent graduating class (academic year 2014-15) and disaggregates the data by age and race/ethnicity. When comparing racial and ethnic groups in the UNC graduating cohorts with the North Carolina general population, the data show that American Indian, Black/African American, and Hispanic students are underrepresented and Asian and White students are overrepresented in this graduating class. These data are shown below in Figure 7.

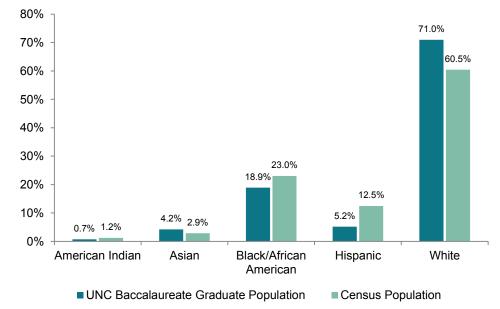


Figure 7: UNC Baccalaureate Graduating Class by Race/Ethnicity, 2014-15 & North Carolina Census, 2010 – Ages 18-34

# Alternative Measures of Success

# **Predicted Graduation Rates**

Predicted graduation rates are an established research method in the field of higher education. Many national organizations advocate for their use and produce reports of their own using this methodology that accounts for institutional differences and student's incoming characteristics (inputs) when examining graduation rates (outputs).<sup>21</sup> UNC-GA conducted a similar analysis that controls for institutional and incoming student characteristics of 15 UNC

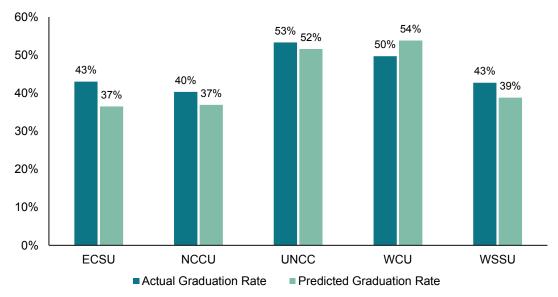
Source: z106\_1415\_grads\_byrace and US Census, 2010

groups used here are those commonly used by the US Census and IPEDS for the US adult population that captures 92% of UNC graduates: 18-24 and 25-34. UNC age data collected from: z106\_1415\_grads\_age and race separate. <sup>21</sup> See <u>http://heri.ucla.edu/DARCU/CompletingCollege2011.pdf</u> and http://www.postsecondary.org/last12/58497InstGradRates.pdf for examples.

institutions and their BOG-approved peer institutions (UNCSA and NCSSM are excluded from the analysis due to their unique attributes).

UNC-GA found that all 15 UNC institutions fall very close to their predicted graduation rates. For all but five of the UNC institutions, the analysis suggests that their graduation rate is not different from what is predicted. In this analysis, one institution, WCU, is statistically below their predicted graduation rate and four institutions, ECSU, NCCU, UNCC, and WSSU, were above their predicted graduation rates. These five institutions and data are presented in Figure 8. For a discussion of the methods, limitations, variables included in this analysis and complete results, please see Appendix E.

Figure 8. Six-year Graduation Rates and Predicted Graduation Rates using Three-Year IPEDS Graduation Rate Average – 2011, 2012, 2013 for UNC Institutions with Statistically Significant Differences<sup>22</sup>



Source: Academic Policy Planning & Analysis\Academic Affairs Projects\Pred Grad Rates

<sup>&</sup>lt;sup>22</sup> Institution is statistically below or above its predicted rate, p<.05

Student Success from the Voluntary System of Accountability

The Voluntary System of Accountability (VSA) supplements traditional IPEDS measures of retention and graduation by expanding data to reflect graduation at any institution and include students who remain enrolled. It is an improved way to report undergraduate student progress and completion by including a greater proportion of students and students who enroll in multiple higher education institutions. For those students who remain enrolled for longer than six years, the vast majority of these students are not continuously enrolled, but stop-out for several semesters or move to part-time status. These students often take only one or two classes to accommodate work schedules or address family or health issues.

Walking through an example of one UNC constituent institution illustrates the utility and function of the VSA tool. Using the traditional methodology as reported on the VSA website, UNCP has a 6-year graduation rate of 33% for all students that matriculated in Fall 2008 (see Figure 9).<sup>23</sup> When accounting for all other institutions where UNCP students have transferred, the graduation rate increases to 45%. Additionally, data show that another 20% are still enrolled and seeking a degree at UNCP or another institution. These numbers together (graduated and still enrolled) constitute the VSA measure for student success, which for UNCP is 65%: a 32% increase over the traditional IPEDS 6-year graduation rate.

Using the VSA student success measure, the campuses with the largest improvements over the traditional IPEDS success measures are UNCP, FSU, UNCC, ECSU, and UNCG. Each UNC institution's VSA Success and Progress Rate is included in Appendix A.

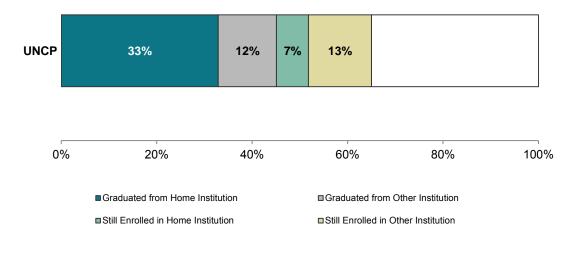


Figure 9: UNCP Undergraduate Six-Year VSA Success and Progress Rate, First-Time Full-Time Students Who Enrolled in Fall 2008

Source: Voluntary System of Accountability, 2016

<sup>&</sup>lt;sup>23</sup> The 6-year graduation data on the VSA website is slightly different than the 6-year graduation data presented in this report. This is due primarily to slightly different cohort definitions used by the VSA.

# **UNC Transfer Student Graduation Rates**

As noted previously, the traditional IPEDS graduation rates do not include transfer students: a population that represents 28% of UNC undergraduate students. Over half (58%) of all UNC transfers come from one of the 58 community colleges in North Carolina, other transfers include students that transfer from an out-of-state institution, students who transfer from North Carolina private institutions and students who transfer between UNC institutions.

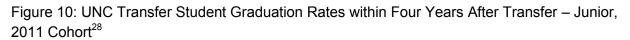
Figure 10 on the next page provides the baccalaureate graduation rates for transfers who entered the UNC system as juniors in the Fall 2011 and graduate with a baccalaureate degree within four years *after* transfer (through Spring 2015).<sup>24</sup> Importantly, it takes students varying lengths of time to reach junior status prior to transfer. For example, students from the NCCCS who transfer with an Associate of Arts or Associate of Science (AA/AS) degree take, on average, slightly more than three years to complete their associate's and transfer to a UNC institution.<sup>25</sup> Therefore, one should take caution in interpreting the phrase "graduate with baccalaureate within four-years after transfer" to mean anything more than what it explicitly states. Namely, that a portion of transfer students graduated with a bachelor's degree from a UNC institution within four years after spending some period of time—roughly three years on average for those from NCCCS with an AA/AS degree—at their previous institution(s).<sup>26</sup>

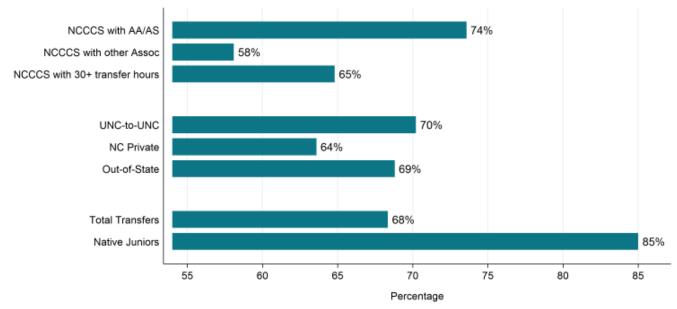
Transfer students with junior status graduate within four years after transfer at a rate of 68%. Non-transfer native UNC students graduate within four years after reaching junior status at a rate of 85%, 17 percentage points higher than the transfer student graduation rate. NCCCS students who transfer with an AA/AS have the second highest graduation rate at 74% (behind UNC native students at 85%), followed by UNC-to-UNC transfers at 70%. NCCCS transfer students with other associate's degree had the lowest graduation rate at 58%.<sup>27</sup>

<sup>&</sup>lt;sup>24</sup> Junior status is achieved by transferring of at least 60 credit hours. Of those students who transferred in 2014, 35% transferred as Juniors. <sup>25</sup> This average is calculated by using the total calendar months passed between initial entry at community college

and entry into UNC, i.e., 12 months equals 1 year. <sup>26</sup> Source: UNC-GA data file z104\_assoc\_time2degree\_v3

<sup>&</sup>lt;sup>27</sup> Other associate degrees include Associate of Applied Science, Associate in General Education, Associate in Engineering, and Associate in Fine Arts.





Source: UNC Transfer Students Dashboard: https://www.northcarolina.edu/infocenter#interactiveData

# Average Semesters to Graduate

The traditional IPEDS measures for graduation rates evaluated success based on the passage of time, assessing whether or not a student graduated in six years, or twelve semesters. However, the 6-year rate captures those who may not have been enrolled every semester during the six year period. The data in this section differentiates the 6-year graduation rate from the number of semesters the student was actually enrolled. One way to think about the difference is the traditional IPEDS graduation rate measures *clock* time, while the average semesters to graduate measures *seat* time. This alternative measure examines the number of semesters in which students enroll; hence it does not penalize for non-continuous enrollment. The data suggest that the UNC system does a good job of graduating students in a timely way when they are enrolled with us: **the average seat time to graduation is just over 8 regular fall/spring semesters with a little less than two summer terms to graduate.**<sup>29</sup>

 <sup>&</sup>lt;sup>28</sup> UNC data shows that after transferring, few students move among UNC campuses. Consequently, graduation data is only reported from the "any UNC institution" category.
 <sup>29</sup> Graduates in the six year period that started as first-time full-time freshmen in Fall 2009. From UNC-GA's data files:

<sup>&</sup>lt;sup>29</sup> Graduates in the six year period that started as first-time full-time freshmen in Fall 2009. From UNC-GA's data files: "Z091\_RetentionGraduation.1.8.16"

# **Degree Efficiency**

When reviewing graduation rates, another tool used to evaluate the effectiveness of degree programs and degree production is the number of bachelor's degrees awarded per 100 full-time equivalent (FTE) undergraduates. This measure evaluates degree production in a given academic year relative to the average number of undergraduate FTE and captures outcomes of undergraduate students regardless of how or when they entered during an academic year (not just the traditional fall semester cohorts). Institutions that have a high value on this measure award high proportions of degrees in relation to the number of undergraduate FTE.

Across the UNC system in 2014-15, the number of bachelor's degrees per 100 FTE undergraduates was 20.9. Appendix F provides data for each campus and the average for their peer institutions over the last five years, during which time only two institutions saw decreases in this measure. Figure 11 illustrates the UNC system average over the last five years for this measure.

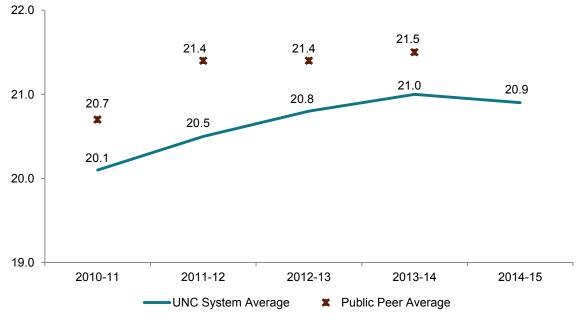


Figure 11: UNC Bachelor's Degree Efficiency, Academic Years 2010-11 through 2014-15<sup>30</sup>

Source: UNC-GA data file pbf.metric03a

<sup>&</sup>lt;sup>30</sup> Peer averages not yet available from IPEDS for 2014-15.

#### Attempted Hours to Degree

For undergraduate degree recipients, UNC measures attempted hours to degree, which evaluates the total number of hours attempted by undergraduates en route to their baccalaureate degree. The metric includes both accepted transfer credits for transfer students and all credits attempted at the graduates' UNC institution. "Attempted hours" is different than "completed/earned hours": attempted hours include courses in which students fail, drop, or withdraw and therefore represent the total number of credits in which the student and the State of North Carolina have invested. As attempted hours are reduced, there is significant cost avoidance for all stakeholders. Most degree programs are 120 credit hours (with notable exceptions for engineering and other science majors who frequently require up to 128 hours-to-graduate).

This metric indicates how efficiently students are progressing towards their degree and helps answer important questions such as whether students are taking the correct courses, whether students are passing their courses, and for transfer students, whether the courses completed at community colleges count toward degree requirements. This metric is a proxy for understanding how well UNC is doing in advising students, enrolling students in required courses, and to some extent, the success of the UNC/NCCCS articulation agreement.

In 2014-15, the average attempted hours to degree across all institutions was 139.2. Appendix G provides institution-level data and the UNC system average for total attempted hours to degree for the last five academic years. Figure 12 shows the UNC average for attempted hours to degree over the last five years. The UNC BOG has set a goal to lower attempted hours to degree to 134 by 2018.

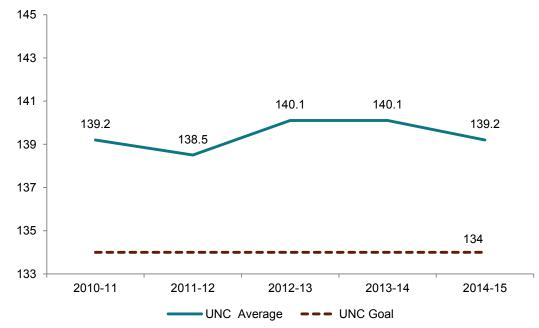


Figure 12: UNC Average Attempted Hours to Degree, 2010-11 through 2014-15

Source: UNC-GA data file SDF\_PR090B2z\_22JAN16

# Appendix A

UNC Undergraduate Retention and Graduation Data: UNC System and by Campus

Note: The data included in the following charts reflect the most up-to-date data for the current reporting year and prior years. Changes have been made in the data over time and records are updated as more accurate data become available. Due to this, there may be slight variations in the historical data presented in this report when compared to prior year reports.

### UNC System

#### **Retention Rates of First-Time Full-Time Freshmen**

Retention	2010 Cohort	2011 Cohort	2012 Cohort	2013 Cohort	2014 Cohort
Original Institution	82.2%	82.6%	83.3%	84.3%	84.2%
Any UNC Institution	84.8%	85.4%	86.2%	87.3%	87.0%
National Public Institutions Avg.	79.3%	79.0%	79.9%	*	*

### Graduation Rates of First-Time Full-Time Freshmen

4-Year Graduation	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort	2011 Cohort
Original Institution	37.4%	38.9%	39.6%	41.2%	42.7%
Any UNC Institution	38.9%	40.5%	41.2%	42.6%	44.2%
National Public Institutions Avg.	33.5%	34.4%	*	*	*

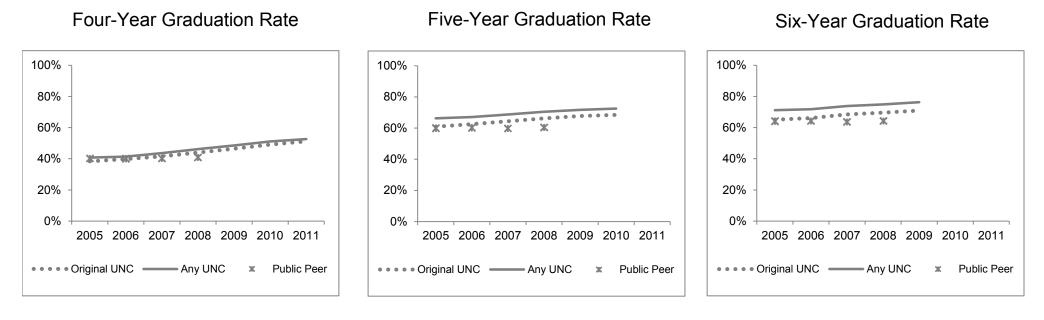
5-Year Graduation	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort
Original Institution	55.4%	56.5%	58.7%	58.4%	59.7%
Any UNC Institution	58.8%	59.8%	62.2%	62.1%	63.0%
National Public Institutions Avg.	51.9%	52.3%	53.1%	*	*

6-Year Graduation	2005 Cohort	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort
Original Institution	59.4%	60.2%	61.2%	63.1%	62.8%
Any UNC Institution	64.0%	64.6%	65.5%	67.5%	67.4%
National Public Institutions Avg.	56.6%	57.2%	57.7%	58.5%	*

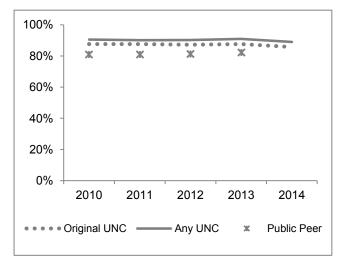
Source: SDF.ER001, SCF.PPM001, & IPEDS

\* Data not available from IPEDS

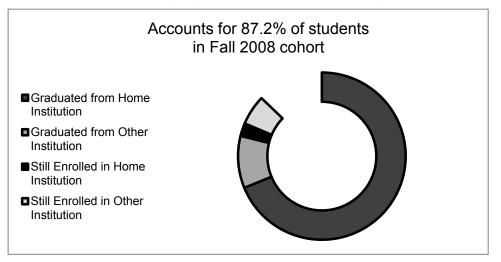
# APPENDIX Q Appalachian State University's Student Success Measures



# **Student Retention**



Voluntary System of Accountability



#### Appalachian State University

# Retention Rates of First-Time Full-Time Freshmen

Retention	2010 Cohort	2011 Cohort	2012 Cohort	2013 Cohort	2014 Cohort		
Original Institution	87.6%	87.6%	87.2%	87.6%	85.8%		
Any UNC Institution	90.5%	90.1%	90.2%	91.0%	89.1%		
BOG-Approved Public Peer Avg.	81.2%	81.0%	81.5%	82.4%	*		

### Graduation Rates of First-Time Full-Time Freshmen

4-Year Graduation	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort	2011 Cohort
Original Institution	41.5%	44.0%	46.4%	49.1%	51.1%
Any UNC Institution	43.6%	46.2%	48.5%	51.1%	52.6%
BOG-Approved Public Peer Avg.	40.4%	41.0%	*	*	*
5-Year Graduation	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort
Original Institution	62.5%	64.4%	66.2%	67.7%	68.5%
Any UNC Institution	67.1%	68.7%	70.5%	71.7%	72.5%
BOG-Approved Public Peer Avg.	60.3%	59.9%	60.5%	*	*

6-Year Graduation	2005 Cohort	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort
Original Institution	65.1%	66.1%	68.5%	69.6%	70.9%
Any UNC Institution	71.2%	71.8%	73.8%	74.9%	76.3%
BOG-Approved Public Peer Avg.	64.3%	64.4%	63.9%	64.4%	*

Source: SDF.ER001, SCF.PPM001, & IPEDS

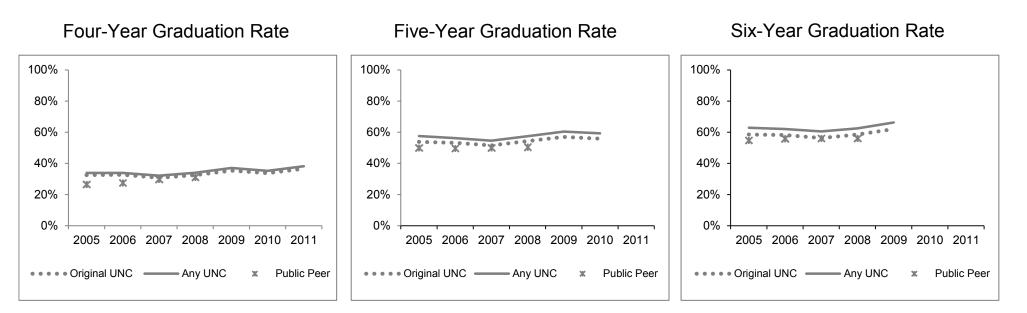
\* Data not available from IPEDS

#### Undergraduate 6-Year Success and Progress Rate, First-Time Full-Time Students Starting Fall 2008

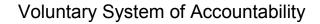
Graduated from Home Inst.	Graduated from Other Inst.	Still Enrolled in Home Inst.	Still Enrolled in Other Inst.	Total Rate
68.8%	10.1%	2.5%	5.8%	87.2%

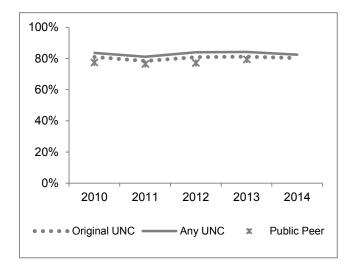
Source: Voluntary System of Accountability (VSA), College Portrait web page

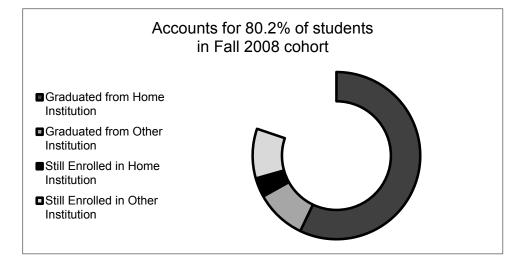
# APPENDIX Q East Carolina University's Student Success Measures



**Student Retention** 







#### APPENDIX Q East Carolina University

# Retention Rates of First-Time Full-Time Freshmen

Retention	2010 Cohort	2011 Cohort	2012 Cohort	2013 Cohort	2014 Cohort
Original Institution	81.0%	78.4%	80.9%	81.2%	80.2%
Any UNC Institution	83.6%	81.1%	84.0%	84.2%	82.4%
BOG-Approved Public Peer Avg.	77.7%	76.5%	77.3%	79.5%	*

### Graduation Rates of First-Time Full-Time Freshmen

4-Year Graduation	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort	2011 Cohort
Original Institution	30.8%	32.5%	35.4%	33.7%	36.6%
Any UNC Institution	32.1%	34.0%	37.1%	35.2%	38.2%
BOG-Approved Public Peer Avg.	29.6%	31.2%	*	*	*

5-Year Graduation	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort
Original Institution	53.2%	51.6%	54.3%	57.0%	55.9%
Any UNC Institution	56.2%	54.6%	57.4%	60.4%	59.3%
BOG-Approved Public Peer Avg.	49.7%	49.9%	50.4%	*	*

6-Year Graduation	2005 Cohort	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort
Original Institution	58.5%	58.2%	56.3%	58.5%	62.0%
Any UNC Institution	62.9%	62.1%	60.5%	62.5%	66.2%
BOG-Approved Public Peer Avg.	54.8%	55.9%	56.0%	56.1%	*

Source: SDF.ER001, SCF.PPM001, & IPEDS

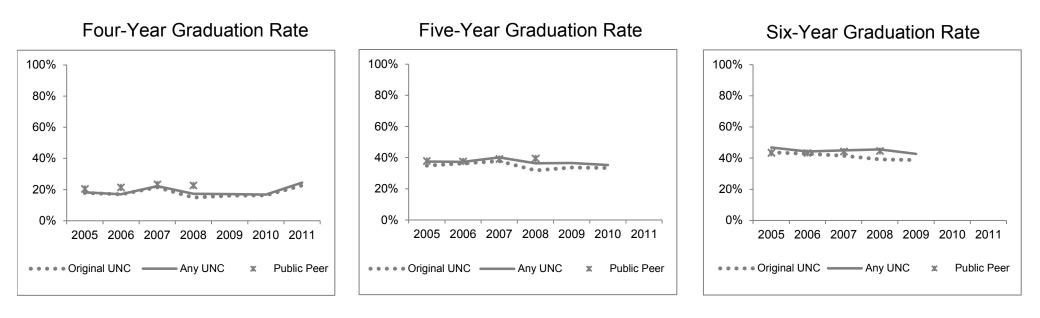
\* Data not available from IPEDS

### Undergraduate 6-Year Success and Progress Rate, First-Time Full-Time Students Starting Fall 2008

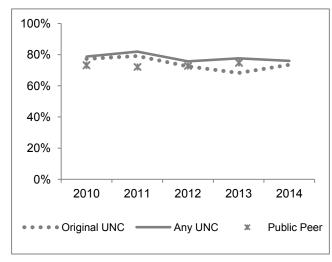
Graduated from Home Inst.	Graduated from Other Inst.	Still Enrolled in Home Inst.	Still Enrolled in Other Inst.	Total Rate
57.1%	9.8%	3.7%	9.6%	80.2%

Source: Voluntary System of Accountability (VSA), College Portrait web page

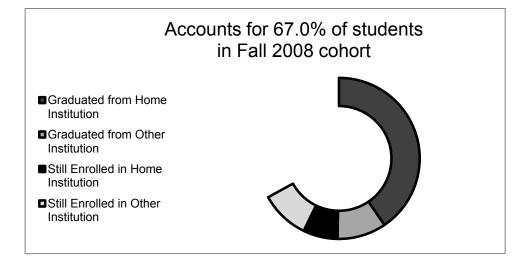
# APPENDIX Q Elizabeth City State University's Student Success Measures



# **Student Retention**



# Voluntary System of Accountability



#### APPENDIX Q Elizabeth City State University

# Retention Rates of First-Time Full-Time Freshmen

Retention	2010 Cohort	2011 Cohort	2012 Cohort	2013 Cohort	2014 Cohort
Original Institution	77.3%	79.1%	72.5%	68.3%	73.5%
Any UNC Institution	78.8%	81.9%	75.7%	77.6%	76.0%
BOG-Approved Public Peer Avg.	73.4%	72.3%	72.9%	74.9%	*

#### Graduation Rates of First-Time Full-Time Freshmen

4-Year Graduation	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort	2011 Cohort
Original Institution	21.4%	14.9%	16.1%	16.3%	22.7%
Any UNC Institution	22.2%	17.3%	17.1%	16.8%	24.5%
BOG-Approved Public Peer Avg.	23.3%	22.9%	*	*	*

5-Year Graduation	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort
Original Institution	36.3%	37.7%	31.8%	33.6%	33.3%
Any UNC Institution	37.3%	40.1%	36.3%	36.5%	35.2%
BOG-Approved Public Peer Avg.	37.7%	39.2%	39.5%	*	*

6-Year Graduation	2005 Cohort	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort
Original Institution	43.7%	42.7%	41.5%	39.2%	38.8%
Any UNC Institution	46.8%	44.2%	45.0%	45.6%	42.7%
BOG-Approved Public Peer Avg.	43.5%	43.3%	44.4%	44.7%	*

Source: SDF.ER001, SCF.PPM001, & IPEDS

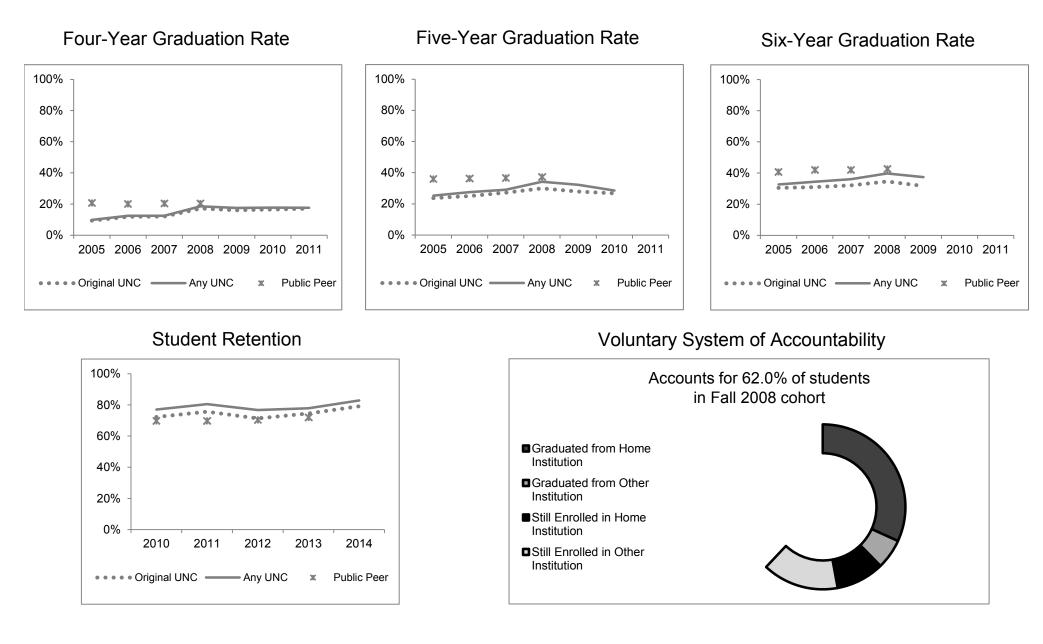
\* Data not available from IPEDS

# Undergraduate 6-Year Success and Progress Rate, First-Time Full-Time Students Starting Fall 2008

Graduated from Home Inst.	Graduated from Other Inst.	Still Enrolled in Home Inst.	Still Enrolled in Other Inst.	Total Rate
40.5%	9.8%	6.9%	9.8%	67.0%

Source: Voluntary System of Accountability (VSA), College Portrait web page

# APPENDIX Q Fayetteville State University's Student Success Measures



#### APPENDIX Q Fayetteville State University

# Retention Rates of First-Time Full-Time Freshmen

Retention	2010 Cohort	2011 Cohort	2012 Cohort	2013 Cohort	2014 Cohort
Original Institution	72.3%	75.6%	71.3%	74.5%	79.1%
Any UNC Institution	77.0%	80.5%	76.7%	77.8%	82.9%
BOG-Approved Public Peer Avg.	69.8%	69.9%	70.5%	72.2%	*

### Graduation Rates of First-Time Full-Time Freshmen

4-Year Graduation	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort	2011 Cohort
Original Institution	12.0%	17.1%	16.0%	16.5%	17.0%
Any UNC Institution	12.5%	18.5%	17.5%	17.7%	17.6%
BOG-Approved Public Peer Avg.	20.5%	20.5%	*	*	*

5-Year Graduation	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort
Original Institution	25.0%	27.2%	29.9%	27.9%	26.8%
Any UNC Institution	27.5%	29.1%	34.2%	32.2%	28.6%
BOG-Approved Public Peer Avg.	36.4%	36.7%	37.4%	*	*

6-Year Graduation	2005 Cohort	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort
Original Institution	30.5%	31.0%	32.1%	34.5%	31.7%
Any UNC Institution	32.7%	34.4%	36.0%	39.7%	37.4%
BOG-Approved Public Peer Avg.	40.8%	42.1%	42.1%	42.6%	*

Source: SDF.ER001, SCF.PPM001, & IPEDS

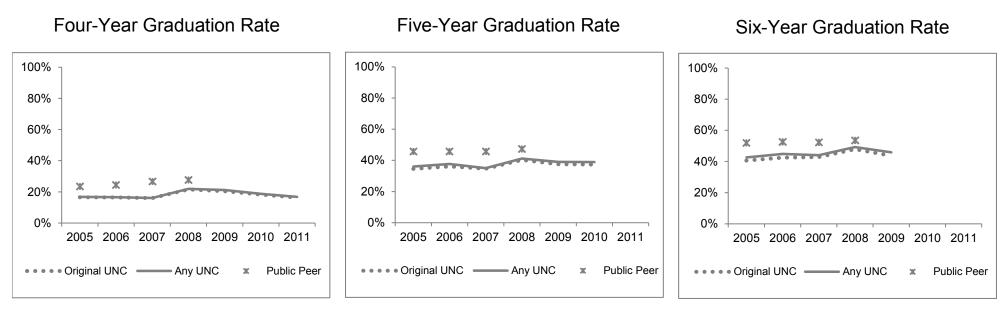
\* Data not available from IPEDS

#### Undergraduate 6-Year Success and Progress Rate, First-Time Full-Time Students Starting Fall 2008

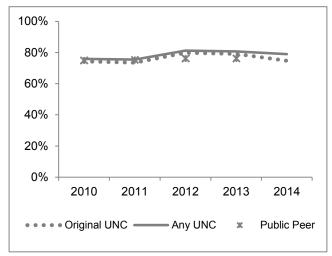
Graduated from Home Inst.	Graduated from Other Inst.	Still Enrolled in Home Inst.	Still Enrolled in Other Inst.	Total Rate
31.8%	5.9%	9.4%	14.9%	62.0%

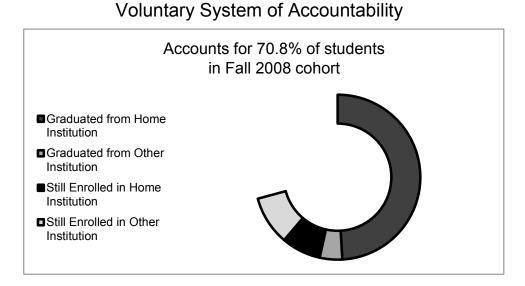
Source: Voluntary System of Accountability (VSA), College Portrait web page

# APPENDIX Q North Carolina's Agricultural & Technical State University's Student Success Measures



# **Student Retention**





#### North Carolina Agricultural & Technical State University

## **Retention Rates of First-Time Full-Time Freshmen**

Retention	2010 Cohort	2011 Cohort	2012 Cohort	2013 Cohort	2014 Cohort
Original Institution	74.3%	73.5%	79.8%	79.1%	74.7%
Any UNC Institution	75.9%	75.5%	81.2%	80.7%	79.0%
BOG-Approved Public Peer Avg.	75.1%	75.3%	76.4%	76.3%	*

### Graduation Rates of First-Time Full-Time Freshmen

4-Year Graduation	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort	2011 Cohort
Original Institution	16.0%	21.5%	20.4%	18.3%	16.3%
Any UNC Institution	16.1%	21.9%	21.2%	18.7%	16.8%
BOG-Approved Public Peer Avg.	26.9%	27.8%	*	*	*

5-Year Graduation	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort
Original Institution	36.1%	34.7%	40.3%	37.5%	37.3%
Any UNC Institution	37.7%	35.0%	41.2%	39.0%	38.9%
BOG-Approved Public Peer Avg.	45.9%	45.9%	47.5%	*	*

6-Year Graduation	2005 Cohort	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort
Original Institution	40.6%	42.4%	42.9%	47.9%	43.7%
Any UNC Institution	42.6%	44.8%	44.0%	49.3%	45.9%
BOG-Approved Public Peer Avg.	52.0%	52.6%	52.4%	53.6%	*

Source: SDF.ER001, SCF.PPM001, & IPEDS

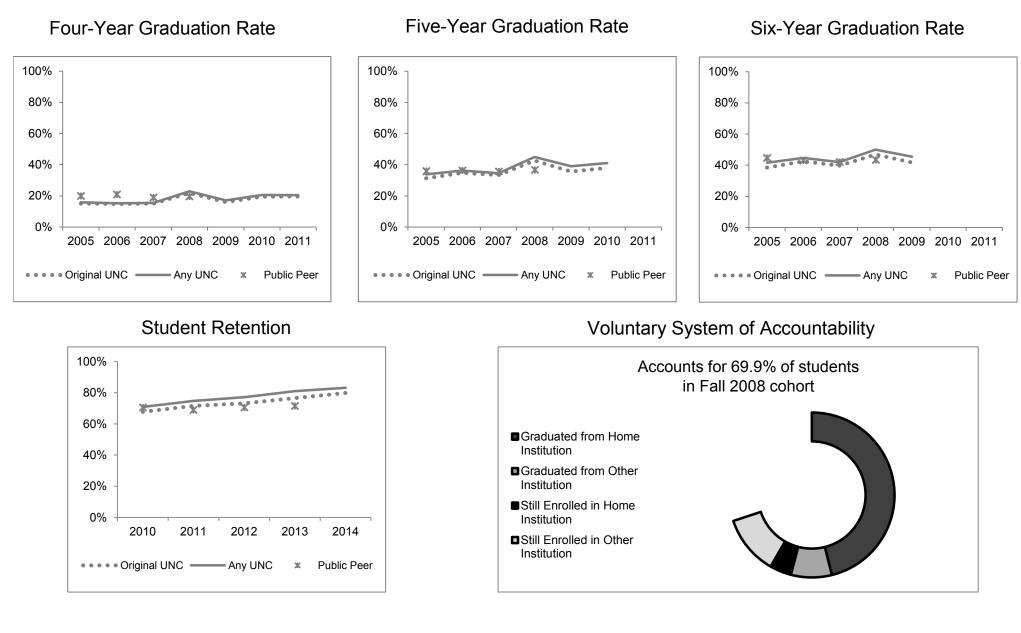
\* Data not available from IPEDS

#### Undergraduate 6-Year Success and Progress Rate, First-Time Full-Time Students Starting Fall 2008

Graduated from Home Inst.	Graduated from Other Inst.	Still Enrolled in Home Inst.	Still Enrolled in Other Inst.	Total Rate
49.1%	4.4%	7.7%	9.6%	70.8%

Source: Voluntary System of Accountability (VSA), College Portrait web page

# APPENDIX Q North Carolina Central University's Student Success Measures



## Retention Rates of First-Time Full-Time Freshmen

Retention	2010 Cohort	2011 Cohort	2012 Cohort	2013 Cohort	2014 Cohort	
Original Institution	67.7%	71.5%	73.2%	76.6%	79.8%	
Any UNC Institution	70.9%	74.8%	77.1%	81.1%	83.2%	
BOG-Approved Public Peer Avg.	70.7%	69.0%	70.5%	71.5%	*	

### Graduation Rates of First-Time Full-Time Freshmen

4-Year Graduation	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort	2011 Cohort
Original Institution	15.0%	21.8%	16.0%	19.5%	19.6%
Any UNC Institution	15.4%	22.9%	17.1%	20.6%	20.5%
BOG-Approved Public Peer Avg.	19.1%	19.8%	*	*	*

5-Year Graduation	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort
Original Institution	34.8%	33.3%	42.6%	35.6%	37.9%
Any UNC Institution	36.2%	34.5%	45.0%	39.0%	41.1%
BOG-Approved Public Peer Avg.	36.5%	35.7%	36.7%	*	*

6-Year Graduation	2005 Cohort	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort
Original Institution	38.4%	42.4%	39.7%	46.8%	41.7%
Any UNC Institution	41.6%	44.6%	42.0%	50.0%	45.5%
BOG-Approved Public Peer Avg.	44.8%	43.1%	42.2%	43.4%	*

Source: SDF.ER001, SCF.PPM001, & IPEDS

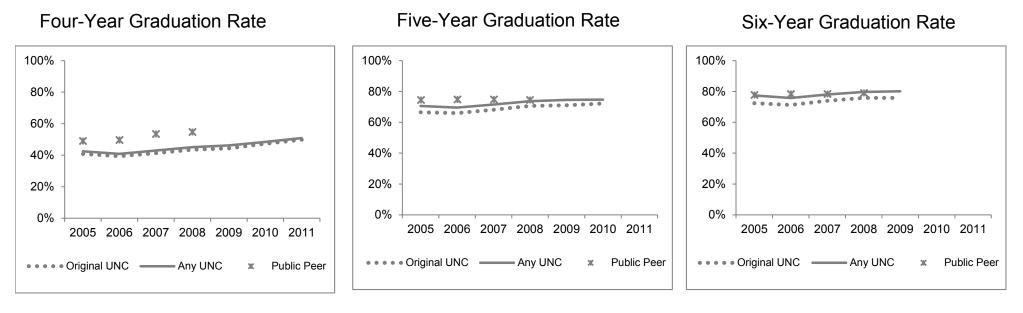
\* Data not available from IPEDS

#### Undergraduate 6-Year Success and Progress Rate, First-Time Full-Time Students Starting Fall 2008

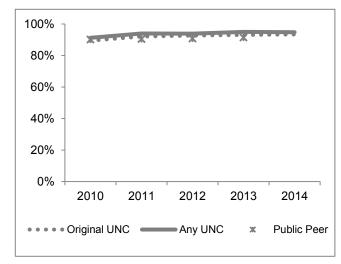
Graduated from Home Inst.	Graduated from Other Inst.	Still Enrolled in Home Inst.	Still Enrolled in Other Inst.	Total Rate
46.1%	8.0%	4.2%	11.6%	69.9%

Source: Voluntary System of Accountability (VSA), College Portrait web page

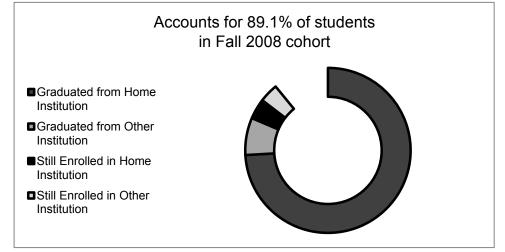
# APPENDIX Q North Carolina State University's Student Success Measures



# **Student Retention**



# Voluntary System of Accountability



#### APPENDIX Q North Carolina State University

# Retention Rates of First-Time Full-Time Freshmen

Retention	2010 Cohort	2011 Cohort	2012 Cohort	2013 Cohort	2014 Cohort
Original Institution	89.4%	92.0%	92.6%	93.0%	93.3%
Any UNC Institution	91.2%	93.9%	93.8%	95.0%	94.7%
BOG-Approved Public Peer Avg.	90.3%	90.5%	90.9%	91.4%	*

### Graduation Rates of First-Time Full-Time Freshmen

4-Year Graduation	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort	2011 Cohort
Original Institution	41.3%	43.5%	44.3%	47.2%	49.8%
Any UNC Institution	42.9%	45.1%	46.2%	48.4%	50.8%
BOG-Approved Public Peer Avg.	53.5%	54.8%	*	*	*

5-Year Graduation	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort
Original Institution	66.0%	68.1%	70.6%	71.0%	72.2%
Any UNC Institution	69.5%	71.5%	73.7%	74.5%	74.7%
BOG-Approved Public Peer Avg.	74.9%	74.8%	74.6%	*	*

6-Year Graduation	2005 Cohort	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort
Original Institution	72.4%	71.2%	73.9%	75.8%	75.8%
Any UNC Institution	77.4%	75.7%	78.0%	79.7%	80.1%
BOG-Approved Public Peer Avg.	77.7%	78.5%	78.4%	79.2%	*

Source: SDF.ER001, SCF.PPM001, & IPEDS

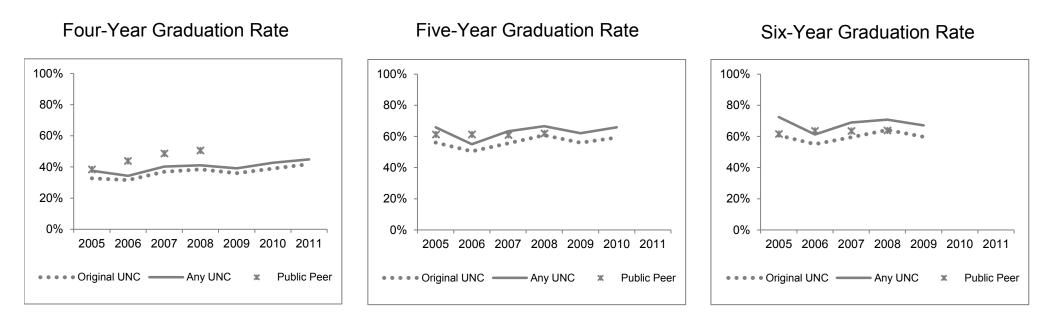
\* Data not available from IPEDS

# Undergraduate 6-Year Success and Progress Rate, First-Time Full-Time Students Starting Fall 2008

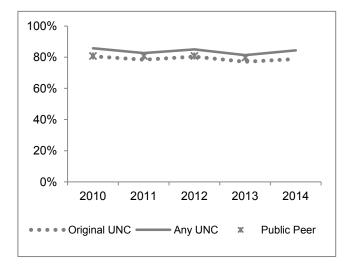
Graduated from Home Inst.	Graduated from Other Inst.	Still Enrolled in Home Inst.	Still Enrolled in Other Inst.	Total Rate
74.1%	7.3%	4.0%	3.7%	89.1%

Source: Voluntary System of Accountability (VSA), College Portrait web page

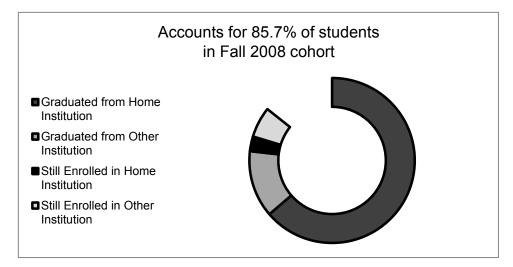
# APPENDIX Q UNC Asheville's Student Success Measures



# **Student Retention**



# Voluntary System of Accountability



#### APPENDIX Q UNC Asheville

## Retention Rates of First-Time Full-Time Freshmen

Retention	2010 Cohort	2011 Cohort	2012 Cohort	2013 Cohort	2014 Cohort
Original Institution	80.6%	78.4%	80.3%	77.1%	78.8%
Any UNC Institution	85.7%	82.7%	85.0%	81.3%	84.4%
BOG-Approved Public Peer Avg.	80.9%	80.9%	81.0%	80.0%	*

## Graduation Rates of First-Time Full-Time Freshmen

4-Year Graduation	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort	2011 Cohort
Original Institution	36.9%	38.4%	36.0%	39.0%	41.8%
Any UNC Institution	40.2%	41.1%	39.1%	42.7%	44.8%
BOG-Approved Public Peer Avg.	48.8%	50.5%	*	*	*

5-Year Graduation	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort
Original Institution	50.4%	55.6%	60.8%	56.0%	59.2%
Any UNC Institution	55.0%	63.3%	66.6%	62.1%	65.9%
BOG-Approved Public Peer Avg.	61.5%	61.1%	61.9%	*	*

6-Year Graduation	2005 Cohort	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort
Original Institution	60.7%	55.0%	59.4%	64.2%	59.9%
Any UNC Institution	72.4%	61.2%	68.9%	70.8%	67.1%
BOG-Approved Public Peer Avg.	61.8%	63.8%	63.4%	64.1%	*

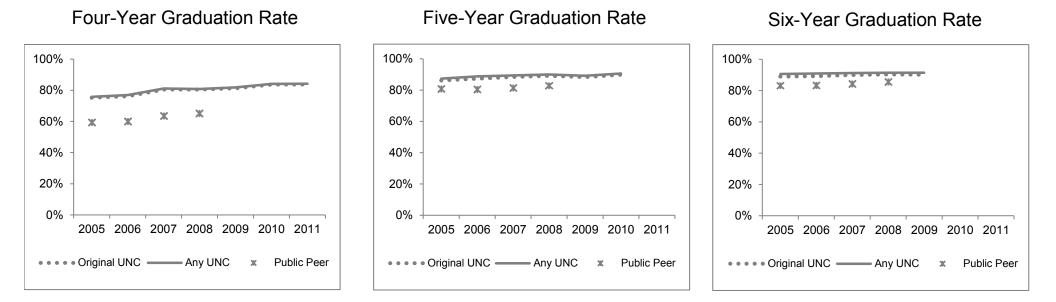
Source: SDF.ER001, SCF.PPM001, & IPEDS

\* Data not available from IPEDS

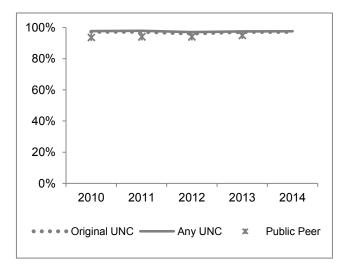
## Undergraduate 6-Year Success and Progress Rate, First-Time Full-Time Students Starting Fall 2008

Graduated from Home Inst.	Graduated from Other Inst.	Still Enrolled in Home Inst.	Still Enrolled in Other Inst.	Total Rate
63.7%	13.1%	2.9%	6.0%	85.7%

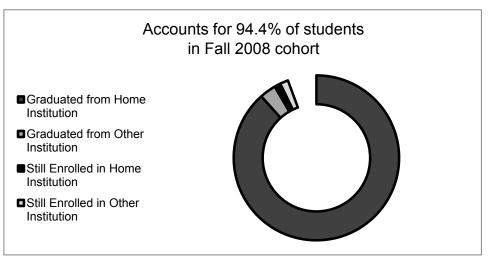
## APPENDIX Q UNC-Chapel Hill's Student Success Measures



# **Student Retention**



# Voluntary System of Accountability



#### APPENDIX Q UNC-Chapel Hill

## Retention Rates of First-Time Full-Time Freshmen

Retention	2010 Cohort	2011 Cohort	2012 Cohort	2013 Cohort	2014 Cohort
Original Institution	97.2%	97.2%	96.1%	97.1%	97.1%
Any UNC Institution	97.7%	97.9%	97.1%	97.5%	97.7%
BOG-Approved Public Peer Avg.	93.9%	94.3%	94.3%	95.1%	*

## Graduation Rates of First-Time Full-Time Freshmen

4-Year Graduation	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort	2011 Cohort
Original Institution	80.5%	80.4%	81.3%	83.6%	83.7%
Any UNC Institution	81.1%	80.8%	81.8%	84.1%	84.2%
BOG-Approved Public Peer Avg.	63.5%	65.1%	*	*	*

5-Year Graduation	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort
Original Institution	87.3%	88.4%	89.1%	88.3%	89.8%
Any UNC Institution	88.7%	89.4%	90.0%	89.2%	90.6%
BOG-Approved Public Peer Avg.	80.4%	81.5%	82.9%	*	*

6-Year Graduation	2005 Cohort	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort
Original Institution	88.9%	89.2%	89.9%	90.3%	90.1%
Any UNC Institution	90.6%	90.9%	91.2%	91.4%	91.4%
BOG-Approved Public Peer Avg.	83.2%	83.5%	84.3%	85.5%	*

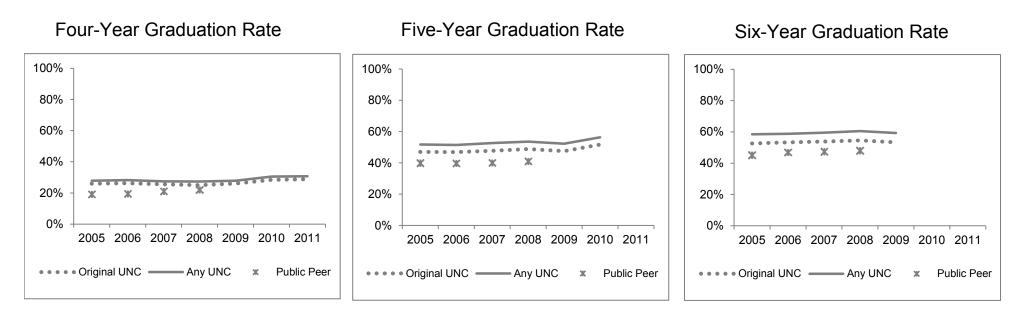
Source: SDF.ER001, SCF.PPM001, & IPEDS

\* Data not available from IPEDS

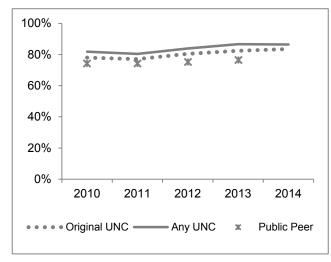
## Undergraduate 6-Year Success and Progress Rate, First-Time Full-Time Students Starting Fall 2008

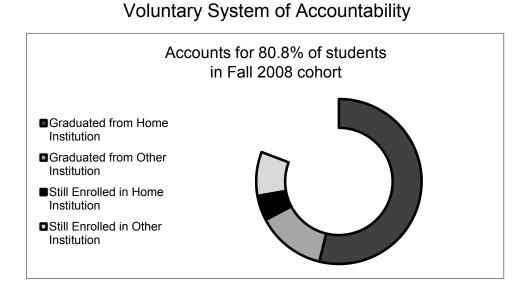
Graduated from Home Inst.	Graduated from Other Inst.	Still Enrolled in Home Inst.	Still Enrolled in Other Inst.	Total Rate
88.4%	3.2%	1.2%	1.6%	94.4%

## APPENDIX Q UNC Charlotte's Student Success Measures



# **Student Retention**





## **Retention Rates of First-Time Full-Time Freshmen**

Retention	2010 Cohort	2011 Cohort	2012 Cohort	2013 Cohort	2014 Cohort
Original Institution	78.0%	77.1%	80.4%	82.4%	83.5%
Any UNC Institution	81.8%	80.4%	83.9%	86.7%	86.5%
BOG-Approved Public Peer Avg.	74.2%	74.3%	75.3%	76.6%	*

## Graduation Rates of First-Time Full-Time Freshmen

4-Year Graduation	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort	2011 Cohort
Original Institution	25.5%	25.0%	26.0%	28.4%	28.8%
Any UNC Institution	27.4%	27.3%	27.8%	30.5%	30.7%
BOG-Approved Public Peer Avg.	21.0%	22.2%	*	*	*

5-Year Graduation	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort
Original Institution	46.9%	47.7%	48.8%	47.5%	51.7%
Any UNC Institution	51.4%	52.6%	53.6%	52.2%	56.3%
BOG-Approved Public Peer Avg.	39.6%	40.1%	41.0%	*	*

6-Year Graduation	2005 Cohort	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort
Original Institution	52.6%	53.3%	53.8%	54.5%	53.3%
Any UNC Institution	58.5%	58.8%	59.5%	60.5%	59.3%
BOG-Approved Public Peer Avg.	45.2%	46.8%	47.4%	48.0%	*

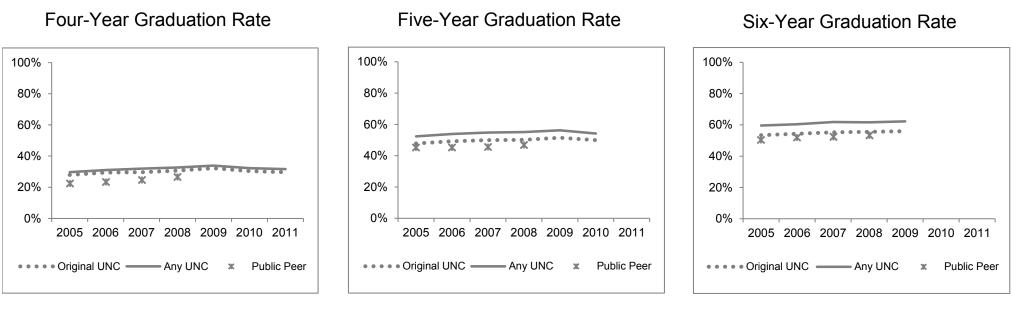
Source: SDF.ER001, SCF.PPM001, & IPEDS

\* Data not available from IPEDS

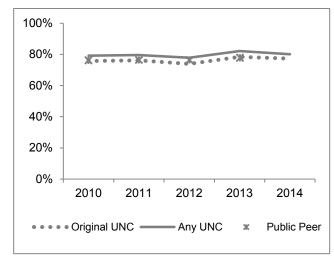
#### Undergraduate 6-Year Success and Progress Rate, First-Time Full-Time Students Starting Fall 2008

Graduated from Home Inst.	Graduated from Other Inst.	Still Enrolled in Home Inst.	Still Enrolled in Other Inst.	Total Rate
53.8%	13.5%	4.9%	8.6%	80.8%

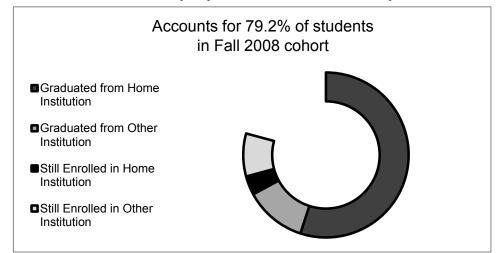
## APPENDIX Q UNC Greensboro's Student Success Measures



# **Student Retention**



# Voluntary System of Accountability



#### APPENDIX Q UNC Greensboro

## Retention Rates of First-Time Full-Time Freshmen

Retention	2010 Cohort	2011 Cohort	2012 Cohort	2013 Cohort	2014 Cohort
Original Institution	75.7%	76.1%	73.9%	78.4%	77.3%
Any UNC Institution	79.2%	79.6%	77.8%	82.1%	80.1%
BOG-Approved Public Peer Avg.	76.2%	76.5%	76.4%	77.9%	*

## Graduation Rates of First-Time Full-Time Freshmen

4-Year Graduation	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort	2011 Cohort
Original Institution	29.6%	30.7%	32.2%	30.4%	29.6%
Any UNC Institution	31.9%	32.7%	33.9%	32.2%	31.6%
BOG-Approved Public Peer Avg.	24.7%	26.8%	*	*	*

5-Year Graduation	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort
Original Institution	49.2%	49.9%	50.2%	51.5%	49.9%
Any UNC Institution	53.9%	54.8%	55.1%	56.2%	54.2%
BOG-Approved Public Peer Avg.	45.5%	45.7%	46.9%	*	*

6-Year Graduation	2005 Cohort	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort
Original Institution	53.4%	54.3%	55.3%	55.6%	56.0%
Any UNC Institution	59.6%	60.4%	61.8%	61.6%	62.2%
BOG-Approved Public Peer Avg.	50.5%	52.1%	52.5%	53.4%	*

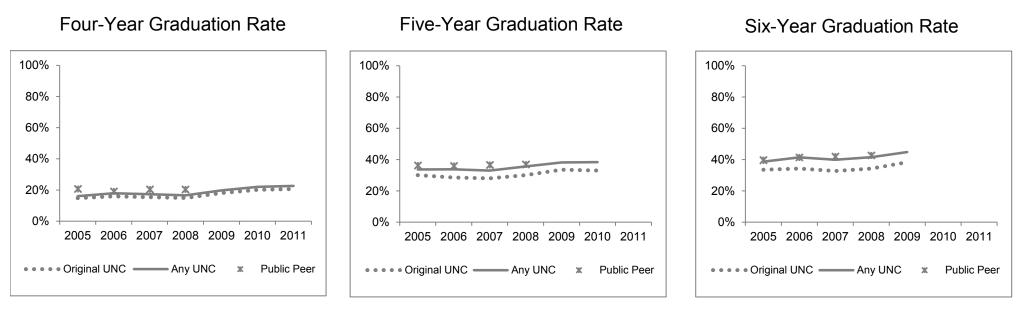
Source: SDF.ER001, SCF.PPM001, & IPEDS

\* Data not available from IPEDS

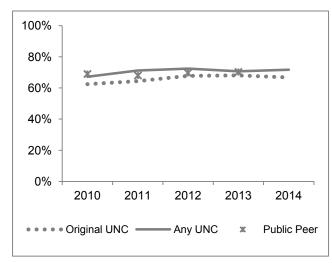
## Undergraduate 6-Year Success and Progress Rate, First-Time Full-Time Students Starting Fall 2008

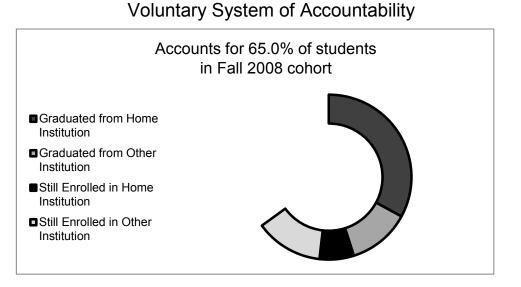
Graduated from Home Inst.	Graduated from Other Inst.	Still Enrolled in Home Inst.	Still Enrolled in Other Inst.	Total Rate
55.0%	12.1%	3.7%	8.4%	79.2%

## APPENDIX Q UNC Pembroke's Student Success Measures



# **Student Retention**





## **UNC Pembroke**

## **Retention Rates of First-Time Full-Time Freshmen**

Retention	2010 Cohort	2011 Cohort	2012 Cohort	2013 Cohort	2014 Cohort
Original Institution	62.4%	64.4%	67.7%	68.1%	66.7%
Any UNC Institution	67.2%	71.2%	72.4%	70.7%	72.3%
BOG-Approved Public Peer Avg.	69.2%	68.0%	69.7%	70.4%	*

## Graduation Rates of First-Time Full-Time Freshmen

4-Year Graduation	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort	2011 Cohort
Original Institution	15.4%	14.9%	18.1%	20.1%	20.6%
Any UNC Institution	17.3%	16.6%	19.7%	22.0%	22.6%
BOG-Approved Public Peer Avg.	20.3%	20.4%	*	*	*

5-Year Graduation	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort
Original Institution	28.5%	28.0%	30.1%	33.5%	33.0%
Any UNC Institution	33.8%	33.0%	35.6%	38.2%	38.4%
BOG-Approved Public Peer Avg.	36.0%	36.6%	37.0%	*	*

6-Year Graduation	2005 Cohort	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort
Original Institution	33.5%	34.2%	32.7%	34.2%	38.3%
Any UNC Institution	38.7%	41.4%	39.9%	41.5%	44.8%
BOG-Approved Public Peer Avg.	39.8%	41.6%	42.0%	42.8%	*

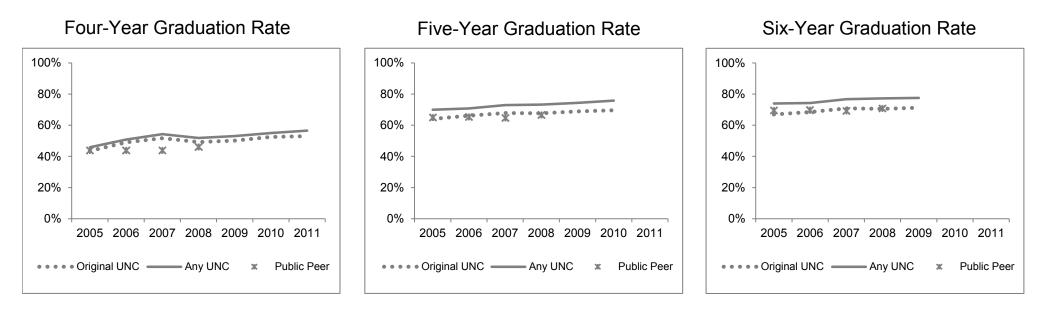
Source: SDF.ER001, SCF.PPM001, & IPEDS

\* Data not available from IPEDS

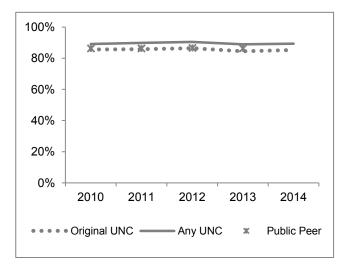
## Undergraduate 6-Year Success and Progress Rate, First-Time Full-Time Students Starting Fall 2008

Graduated from Home Inst.	Graduated from Other Inst.	Still Enrolled in Home Inst.	Still Enrolled in Other Inst.	Total Rate
32.9%	12.2%	6.7%	13.2%	65.0%

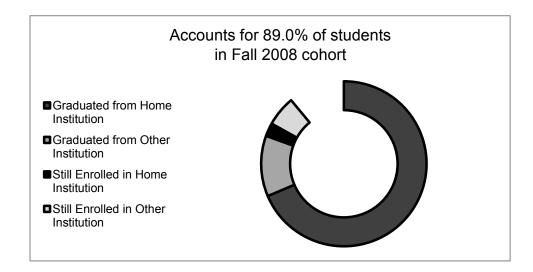
## APPENDIX Q UNC Wilmington's Student Success Measures



# **Student Retention**



# Voluntary System of Accountability



#### APPENDIX Q UNC Wilmington

## Retention Rates of First-Time Full-Time Freshmen

Retention	2010 Cohort	2011 Cohort	2012 Cohort	2013 Cohort	2014 Cohort
Original Institution	85.6%	85.8%	86.4%	84.4%	85.3%
Any UNC Institution	89.1%	89.8%	90.4%	88.9%	89.3%
BOG-Approved Public Peer Avg.	86.4%	86.4%	86.7%	86.4%	*

## Graduation Rates of First-Time Full-Time Freshmen

4-Year Graduation	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort	2011 Cohort
Original Institution	51.7%	49.2%	50.1%	52.5%	53.0%
Any UNC Institution	54.3%	51.8%	53.0%	55.0%	56.5%
BOG-Approved Public Peer Avg.	44.0%	46.1%	*	*	*

5-Year Graduation	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort
Original Institution	66.1%	67.8%	67.6%	68.9%	69.6%
Any UNC Institution	70.8%	72.9%	73.2%	74.4%	75.8%
BOG-Approved Public Peer Avg.	65.5%	64.7%	66.8%	*	*

6-Year Graduation	2005 Cohort	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort
Original Institution	66.9%	68.5%	70.8%	70.5%	71.2%
Any UNC Institution	73.9%	74.2%	76.7%	77.2%	77.5%
BOG-Approved Public Peer Avg.	69.6%	69.8%	69.3%	70.8%	*

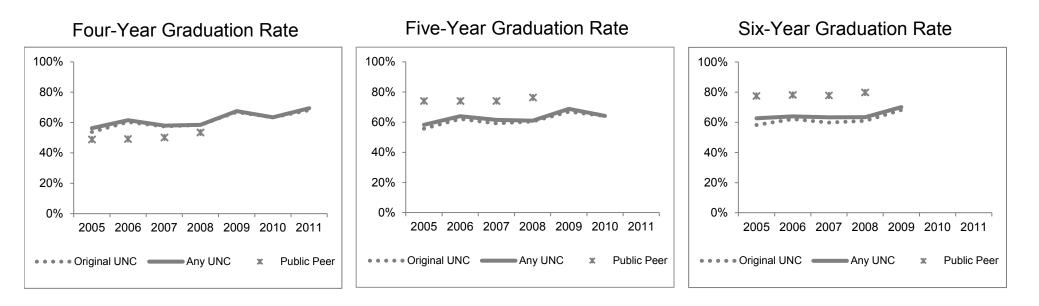
Source: SDF.ER001, SCF.PPM001, & IPEDS

\* Data not available from IPEDS

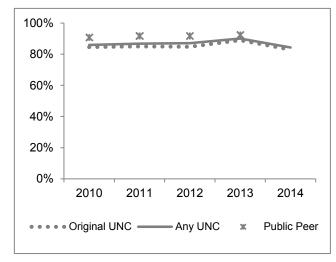
## Undergraduate 6-Year Success and Progress Rate, First-Time Full-Time Students Starting Fall 2008

	Graduated from Home Inst.	Graduated from Other Inst.	Still Enrolled in Home Inst.	Still Enrolled in Other Inst.	Total Rate
ſ	68.6%	11.9%	2.6%	5.9%	89.0%

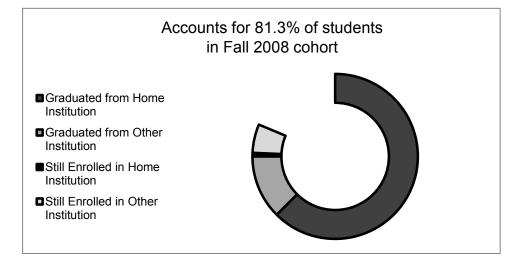
## APPENDIX Q UNC School of the Arts' Student Success Measures



# **Student Retention**



# Voluntary System of Accountability



#### APPENDIX Q UNC School of the Arts

## Retention Rates of First-Time Full-Time Freshmen

Retention	2010 Cohort	2011 Cohort	2012 Cohort	2013 Cohort	2014 Cohort
Original Institution	84.5%	85.0%	84.8%	89.0%	82.9%
Any UNC Institution	85.9%	86.7%	87.1%	90.0%	84.3%
BOG-Approved Public Peer Avg.	90.9%	91.7%	91.7%	92.3%	*

## Graduation Rates of First-Time Full-Time Freshmen

4-Year Graduation	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort	2011 Cohort
Original Institution	57.4%	58.5%	66.9%	63.4%	68.2%
Any UNC Institution	58.0%	58.5%	67.5%	63.4%	69.4%
BOG-Approved Public Peer Avg.	50.3%	53.5%	*	*	*

5-Year Graduation	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort
Original Institution	62.1%	59.2%	60.4%	66.9%	64.1%
Any UNC Institution	63.9%	61.5%	61.0%	68.8%	64.1%
BOG-Approved Public Peer Avg.	74.1%	74.0%	76.3%	*	*

6-Year Graduation	2005 Cohort	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort
Original Institution	58.2%	62.1%	59.8%	61.0%	68.2%
Any UNC Institution	62.7%	63.9%	63.3%	63.4%	70.1%
BOG-Approved Public Peer Avg.	77.6%	78.2%	78.0%	79.9%	*

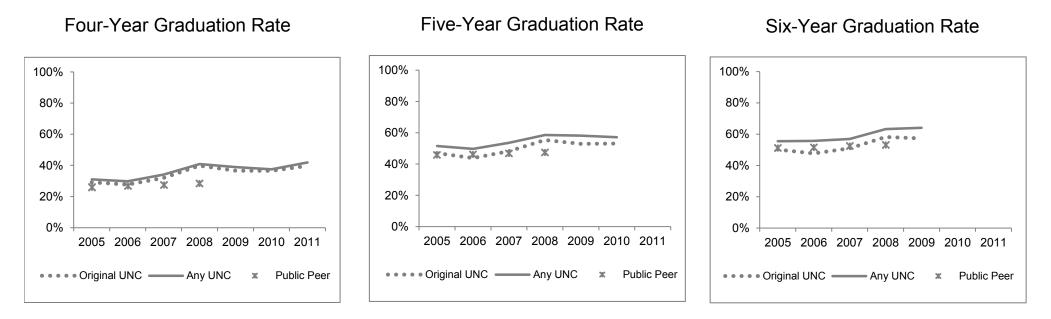
Source: SDF.ER001, SCF.PPM001, & IPEDS

\* Data not available from IPEDS

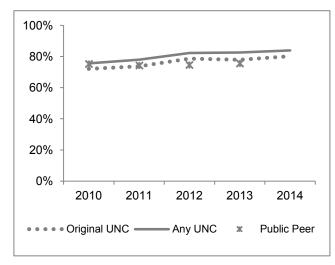
## Undergraduate 6-Year Success and Progress Rate, First-Time Full-Time Students Starting Fall 2008

Graduated from Home Inst.	Graduated from Other Inst.	Still Enrolled in Home Inst.	Still Enrolled in Other Inst.	Total Rate
62.5%	12.5%	0.7%	5.6%	81.3%

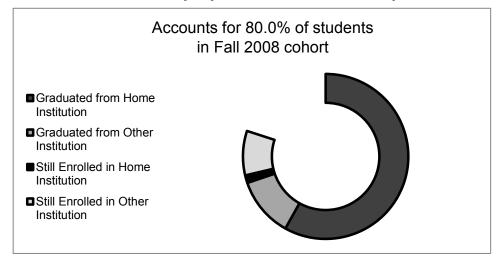
## APPENDIX Q Western Carolina University's Student Success Measures



# **Student Retention**



Voluntary System of Accountability



#### APPENDIX Q Western Carolina University

## Retention Rates of First-Time Full-Time Freshmen

Retention	2010 Cohort	2011 Cohort	2012 Cohort	2013 Cohort	2014 Cohort
Original Institution	72.0%	73.7%	78.6%	77.9%	80.1%
Any UNC Institution	75.6%	77.9%	82.3%	82.6%	83.9%
BOG-Approved Public Peer Avg.	75.2%	74.4%	74.6%	75.6%	*

## Graduation Rates of First-Time Full-Time Freshmen

4-Year Graduation	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort	2011 Cohort
Original Institution	32.0%	39.8%	36.6%	36.5%	39.8%
Any UNC Institution	34.1%	40.9%	38.9%	37.5%	42.0%
BOG-Approved Public Peer Avg.	27.5%	28.6%	*	*	*

5-Year Graduation	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort
Original Institution	43.8%	48.2%	55.4%	52.9%	53.1%
Any UNC Institution	49.7%	53.6%	58.6%	58.2%	57.1%
BOG-Approved Public Peer Avg.	46.2%	46.9%	47.5%	*	*

6-Year Graduation	2005 Cohort	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort
Original Institution	50.2%	47.7%	51.0%	58.2%	57.3%
Any UNC Institution	55.5%	55.7%	56.9%	63.3%	64.1%
BOG-Approved Public Peer Avg.	51.3%	51.7%	52.5%	53.2%	*

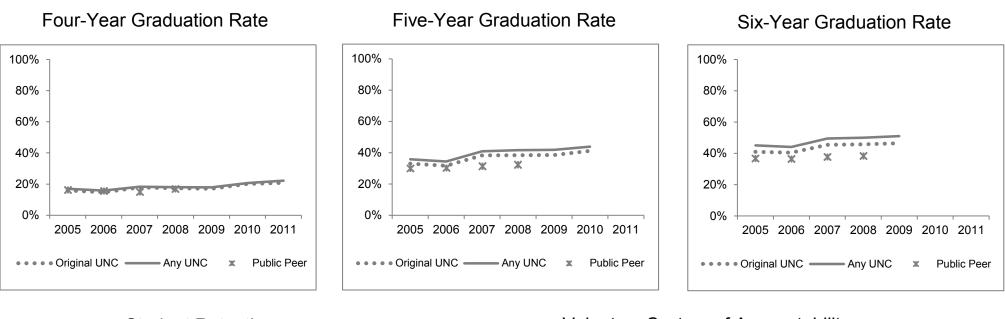
Source: SDF.ER001, SCF.PPM001, & IPEDS

\* Data not available from IPEDS

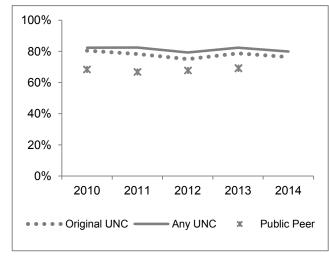
## Undergraduate 6-Year Success and Progress Rate, First-Time Full-Time Students Starting Fall 2008

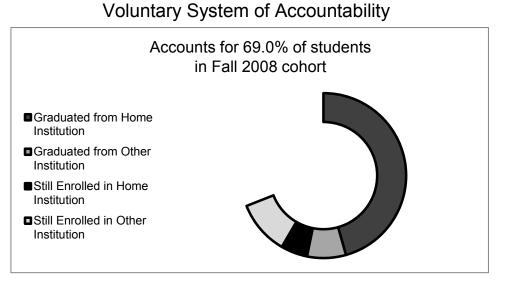
Graduated from Home Inst.	Graduated from Other Inst.	Still Enrolled in Home Inst.	Still Enrolled in Other Inst.	Total Rate
58.1%	11.7%	1.5%	8.7%	80.0%

## APPENDIX Q Winston-Salem State University's Student Success Measures



# **Student Retention**





## APPENDIX Q Winston-Salem State University

## Retention Rates of First-Time Full-Time Freshmen

Retention	2010 Cohort	2011 Cohort	2012 Cohort	2013 Cohort	2014 Cohort
Original Institution	80.4%	78.3%	75.0%	78.7%	76.3%
Any UNC Institution	82.3%	82.4%	79.3%	82.3%	80.5%
BOG-Approved Public Peer Avg.	68.5%	66.8%	67.8%	69.3%	*

#### Graduation Rates of First-Time Full-Time Freshmen

4-Year Graduation	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort	2011 Cohort
Original Institution	17.8%	17.3%	17.0%	20.1%	20.8%
Any UNC Institution	18.3%	18.0%	17.9%	20.7%	22.2%
BOG-Approved Public Peer Avg.	15.1%	16.9%	*	*	*

5-Year Graduation	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort	2010 Cohort
Original Institution	31.7%	38.3%	38.4%	38.5%	41.2%
Any UNC Institution	34.4%	40.9%	41.6%	41.8%	43.9%
BOG-Approved Public Peer Avg.	30.4%	31.4%	32.4%	*	*

6-Year Graduation	2005 Cohort	2006 Cohort	2007 Cohort	2008 Cohort	2009 Cohort
Original Institution	41.0%	40.5%	45.5%	45.8%	46.5%
Any UNC Institution	45.1%	44.1%	49.5%	50.0%	51.0%
BOG-Approved Public Peer Avg.	36.9%	36.6%	37.7%	38.5%	*

Source: SDF.ER001, SCF.PPM001, & IPEDS

\* Data not available from IPEDS

## Undergraduate 6-Year Success and Progress Rate, First-Time Full-Time Students Starting Fall 2008

Graduated from Home Inst.	Graduated from Other Inst.	Still Enrolled in Home Inst.	Still Enrolled in Other Inst.	Total Rate
45.6%	7.6%	5.2%	10.6%	69.0%

# Appendix B

# Graduation Rates by Underrepresented Minority Status

	Underrepres	ented Minority	Ot	Other		
	% of			% of		
	Graduation	Graduating	Graduation	Graduating		
Cohort	Rate (%)	Cohort	Rate (%)	Cohort		
2005	49.1	23.6	70.0	76.4		
2006	51.8	23.6	69.4	76.4		
2007	51.7	22.9	70.7	77.1		
2008	55.4	23.3	72.0	76.7		
2009	54.7	23.8	72.3	76.2		

Source: z099\_gradrates\_race\_age\_v2

# Appendix C

# Graduation Rates by Pell Grant Status

	4-Year Graduation Rate (%)		5-Year Graduation Rate (%)		6-Year Graduation Rate (%)	
	Did Receive Pell Grant	Did Not Receive Pell Grant	Did Receive Pell Grant	Did Not Receive Pell Grant	Did Receive Pell Grant	Did Not Receive Pell Grant
2005	24.8	43.2	45.9	64.7	54.1	69.1
2006	25.9	43.6	48.8	63.9	57.3	68.1
2007	29.2	44.4	52.4	63.8	59.5	68.6
2008	32.5	45.2	55.5	66.0	62.0	70.5
2009	31.6	47.4	53.3	67.5	59.7	72.2
2010	32.1	49.6	53.3	69.4	*	*
2011	31.5	51.5	*	*	*	*

\*Data not available

Source: z099\_gradrates\_pell

# Appendix D

# Graduation Rates by Gender

	4-Year Graduation Rate (%)		5-Year Graduation Rate (%)		6-Year Graduation Rate (%)	
Cohort	Female	Male	Female	Male	Female	Male
2005	41.3	30.2	61.2	53.5	66.2	60.4
2006	42.8	29.9	62.3	53.5	67.2	60.3
2007	44.4	31.3	63.4	54.5	68.3	61.2
2008	46.1	33.0	66.0	56.8	70.5	63.1
2009	46.9	33.5	66.2	56.2	70.6	62.8
2010	48.7	34.5	67.3	57.1	*	*
2011	46.9	37.1	*	*	*	*

Source: z099\_gradrates\_gender

## Appendix E

## Predicted Graduation Rates

## Data

All data were obtained from College Results, a project of the Education Trust, which is populated by federal sites such as the National Center for Education Statistics (NCES) and the Integrated Postsecondary Education Data System (IPEDS). The outcome variable examined is the IPEDS 6-year graduation rate for first-time, full-time freshmen who began college in Fall 2007 and had graduated by Spring 2013. The 3-year average graduation rate is calculated by averaging the 6-year rate for first-time, full-time freshmen who began in Fall 2005, 2006, and 2007.

Table 1 presents the descriptive 6-year graduation rate for each of the 15 UNC institutions and their BOG-approved peer institutions (UNCSA and NCSSM are excluded from the analysis due to their unique attributes). As Table 1 shows, some UNC institutions are above their peer average and some are below. However, this chart displays just the descriptive rate and does not take into account any student (e.g., financial need, incoming academic ability, etc) or institutional characteristics (e.g., endowment, size, etc) that prior social science research has shown to influence completion.

	3 year IPEDS Graduation Rate							
	Average - 2011, 2012, 2013							
Institution	Actual	Peer Avg	Difference					
	(%)	(%)	(%)					
ASU	66.7	63.4	3.3					
ECU	57.7	53.7	4					
ECSU	43	42.7	0.3					
FSU	31.3	41.5	-10.2					
NCA&T	42.3	50.5	-8.2					
NCCU	40.3	44.4	-4.1					
NCSU	72.3	77.8	-5.5					
UNCA	58.7	64.1	-5.4					
UNC-CH	89.3	87.2	2.1					
UNCC	53.3	46.8	6.5					
UNCG	54.3	49.5	4.8					
UNCP	33.7	38.9	-5.2					
UNCW	69	69.1	-0.1					
WCU	49.7	52.4	-2.7					
WSSU	42.7	40.4	2.3					

Table 1: Peer Institutions Descriptive Six-Year Graduation Rates

## Method

There are key institutional and student characteristics that previous literature has demonstrated are important that are included in this model. Control variables are added to the model to account for student's incoming differences (e.g., underrepresented minority status, Pell recipient, etc.) as well as institutional characteristics (e.g., public/private, endowment per FTE, Carnegie classification, etc.). See list Table 2 for a full list of the included variables. These covariates are then regressed on the graduation rate to calculate each institution's "predicted" graduation rate and the associated 95% confidence interval. The predicted graduation rate and the confidence interval are then compared to an institution's three-year graduation rate. If an individual institution's actual graduation rate falls outside of the 95% confidence interval, it is statistically different from the prediction.

We estimate the predicted graduation rates using Ordinary Least Squares Regression of the form:

Gradi = β0i + β1iStudAcadi + β2iStudFini + β3iStudDemoi + β4iInsti + ei

Where StudAcadi represents students' academic background, StudFini represents students' financial information, StudDemoi is a vector of student demographic characteristics, and Insti is a vector of institutional characteristics.

## Limitations

There are limitations to this method. First, we are limited to only the variables available through College Results, so important variables like distance from campus to home residence are not available. Second, and related, the data are aggregated at the institutional level. When doing predictions it is preferable to have individual level data as that allows for more precision; however, it is not possible to obtain individual level data from all of the peer institutions. Third, the data are from a variety of years. For example, the cohort in this study began higher education in Fall 2007. However, due to reporting changes in IPEDS, the variable for percent admitted is for the incoming cohort of either 2011 or 2012. Although there are other variables in the model that suffer from similar timing differences, the variables used are consistent for all of the institutions.

Fourth, what variables are included in the model makes a difference. The "Bailey axiom" was followed, which advises that you "control sparingly" in your model.<sup>31</sup> The rationale behind this is that we do not want to control for conscious decisions that institutions are making. For example, if an institution decides to consciously lower class sizes to help increase the graduation rate, controlling for average class size would negate the effect in the model. Rather, it is advised to control for student inputs and a few broad institutional characteristics only – and

<sup>&</sup>lt;sup>31</sup> Bailey, T & Xu, D. (2012 September). Input-adjusted graduation rates and college accountability: What is known from twenty years of research? HCM Strategists.

to have those characteristics be ones over which the institution has little direct control (i.e., Endowment per FTE). Fifth, the selection of the outcome variable is important. For example, Kelchan and Harris recommend using a three year average of graduation rates as way to improve stability of the outcome measure.<sup>32</sup>

## Results

All 15 UNC institutions fall very close to their predicted graduation rates. As would be expected, a majority of the UNC institution's actual graduation rate falls within the 95% confidence interval. For these institutions we conclude that their graduation rate is not different from what is predicted. One institution was below and four were above their statistically predicated graduation rate. WCU was below and ECSU, NCCU, UNCC, and WSSU were above their predicted graduation rates. Full results are in Table 2 on the next page.

<sup>&</sup>lt;sup>32</sup> Kelchan, R. & Harris, D. (2012 September). Can "value added" methods improve the measurement of college performance? Empirical analyses and policy implications. HCM Strategists.

	3 year IPEDS Graduation Rate Average						
	- 2011, 2012, 2013						
Institution	Actual	Predicted	Difference				
Institution	(%)	(%)	(%)				
ASU	66.7	67.48	-0.81				
ECU	57.7	59.38	-1.71				
ECSU	43	36.53	6.47*				
FSU	31.3	29.01	2.33				
NCA&T	42.3	41.16	1.18				
NCCU	40.3	36.9	3.44*				
NCSU	72.3	71.42	0.92				
UNCA	58.7	58.43	0.24				
UNC-CH	89.3	87.58	1.75				
UNCC	53.3	51.55	1.78*				
UNCG	54.3	53.24	1.09				
UNCP	33.7	33.43	0.24				
UNCW	69	67.25	1.75				
WCU	49.7	53.81	-4.14*				
WSSU	42.7	38.82	3.84*				

Table 2: Six-Year Graduation and Predicted Graduation Rates for the 2007 cohort

\*Institution is statistically below or above its predicted rate, p<.05

Note: As indicated above, and in recommended in the literature, we used a three year average for the graduation rate outcome (2011, 2012, 2013). However, for our control variables we used data on the incoming class of 2007 only, except where that was not possible due to data availability. When data from other years was included, it was applied consistently for all institutions.

Source: E:\Projects\Pred Grad Rates\analysis

Variables included in model:

- number in the 2007 cohort
- % of students receiving Pell
- Median SAT/ACT; % part-time
- % receiving federal aid other than Pell
- E&G expenditures by FTE
- Endowment by FTE
- % men
- % admitted
- % over age 25
- % underrepresented minority
- HBCU
- Carnegie classification
- Public

# Appendix F

# Number of Degrees per 100 FTE Undergraduate Students 2010-11 through 2014-15

		2010-11	2011-12	2012-13	2013-14	2014-15	5-Year Change
ASU	Campus Rate	21.2	23.4	22.5	22.0	23.6	2.4
	BOG Public Peer Average	22.1	22.3	22.6	22.4	*	
	Difference	-0.9	1.1	-0.1	-0.4	*	
ECU	Campus Rate	20.0	21.1	21.4	20.0	20.6	0.6
	BOG Public Peer Average	21.0	22.1	22.3	22.5	*	
	Difference	-1.0	-1.0	-0.9	-2.5	*	
ECSU	Campus Rate	15.9	13.1	14.3	16.2	15.1	-0.8
	BOG Public Peer Average	19.2	19.3	19.4	18.6	*	
	Difference	-3.3	-6.2	-5.1	-2.4	*	
FSU	Campus Rate	17.9	19.8	18.7	19.6	18.7	0.8
	BOG Public Peer Average	18.4	19.1	19.2	19.2	*	
	Difference	-0.5	0.7	-0.5	0.4	*	
NCA&T	Campus Rate	13.9	13.9	14.5	15.5	14.5	0.6
	BOG Public Peer Average	20.1	20.7	21.0	21.1	*	
	Difference	-6.2	-6.8	-6.5	-5.6	*	
NCCU	Campus Rate	14.8	14.9	16.1	16.8	16.9	2.1
	BOG Public Peer Average	20.4	21.0	20.7	21.1	*	
	Difference	-5.6	-6.1	-4.6	-4.3	*	
NCSU	Campus Rate	22.7	23.6	22.9	23.3	23.5	0.8
	BOG Public Peer Average	23.1	23.1	23.0	23.4	*	
	Difference	-0.4	0.5	-0.1	-0.1	*	
UNCA	Campus Rate	20.9	21.4	21.3	22.1	21.7	0.8
	BOG Public Peer Average	20.4	21.3	20.5	20.6	*	
	Difference	0.5	0.1	0.8	1.5	*	
UNC-CH	Campus Rate	26.4	24.9	25.4	24.9	25.2	-1.2
	BOG Public Peer Average	24.5	24.6	24.8	24.7	*	
	Difference	1.9	0.3	0.6	0.2	*	
UNCC	Campus Rate	22.6	22.7	23.0	23.1	23.1	0.5
	BOG Public Peer Average	21.6	22.4	22.8	22.7	*	
	Difference	1.0	0.3	0.2	0.4	*	
UNCG	Campus Rate	21.0	21.6	21.5	21.4	20.0	-1.0
	BOG Public Peer Average	21.5	22.4	22.7	22.8	*	
	Difference	-0.5	-0.8	-1.2	-1.4	*	
UNCP	Campus Rate	16.5	17.7	18.8	19.2	17.2	0.7
	BOG Public Peer Average	19.4	20.2	20.4	21.1	*	
	Difference	-2.9	-2.5	-1.6	-1.9	*	

							5-Year
		2010-11	2011-12	2012-13	2013-14	2014-15	Change
UNCW	Campus Rate	24.2	24.4	24.0	24.4	24.3	0.1
	BOG Public Peer Average	22.5	22.9	22.7	22.8	*	
	Difference	1.7	1.5	1.3	1.6	*	
UNCSA	Campus Rate	16.6	16.2	18.2	17.0	18.7	2.1
	BOG Public Peer Average	20.9	22.2	20.9	21.4	*	
	Difference	-4.3	-6.0	-2.7	-4.4	*	
WCU	Campus Rate	24.1	25.7	24.9	26.0	27.3	3.2
	BOG Public Peer Average	21.3	21.9	21.9	22.0	*	
	Difference	2.8	3.8	3.0	4.0	*	
WSSU	Campus Rate	22.5	23.1	24.8	24.8	24.5	2.0
	BOG Public Peer Average	16.8	17.9	17.9	17.5	*	
	Difference	5.7	5.2	6.9	7.3	*	
UNC Total	System Rate	20.1	20.5	20.8	21.0	20.9	0.8
	BOG Public Peer Average	20.8	21.4	21.4	21.5	*	
	Difference	-0.7	-0.9	-0.6	-0.5	*	

\*Public peer information not available for this year Source: SDF.GR361.Metric03A\_publicpeer.G

Note: All data for this measure is collected from IPEDS. Campus rates are calculated using student-level data. The Public Peer Average is calculated by averaging the campus numbers for all BOG-approved peers. The UNC Total is an average of all 16 UNC campuses.

#### Appendix G

## Attempted Hours to Degree Academic Years 2010-11 through 2014-15<sup>33</sup>

	2010-11	2011-12	2012-13	2013-14	2014-15
ASU	141.3	141.3	140.7	142.5	141.9
ECU	140.1	135.0	145.3	144.1	144.6
ECSU	154.4	156.0	155.7	158.4	156.4
FSU	162.6	159.7	161.2	160.5	158.0
NCA&T	159.1	157.8	156.2	155.0	152.4
NCCU	160.2	153.8	152.8	150.4	149.4
NCSU	130.9	136.4	134.2	133.0	132.4
UNCA	140.0	139.9	143.7	137.7	137.7
UNC-CH	130.7	129.1	128.7	128.7	127.9
UNCC	139.6	139.9	141.1	141.1	139.6
UNCG	136.0	127.2	134.9	139.3	139.8
UNCP	146.5	145.8	145.7	145.2	143.4
UNCW	137.5	137.1	138.0	137.4	137.8
UNCSA <sup>9</sup>	*	*	145.8	139.8	133.2
WCU	142.4	143.0	142.9	145.6	143.6
WSSU	137.1	141.3	141.8	138.0	132.9
UNC Average	139.2	138.5	140.1	140.1	139.2

#### Source: UNC-GA IRA/SDF.PR090B2Z/22JAN16

Note: The calculation includes all bachelor's degree recipients in a given year, excluding BArch degrees (a five-year program), in an academic year (Summer II, Fall, Spring, Summer I), which is a measure of the average hours accumulated. Hours accumulated are defined as total academic credit hours transferred (SDF item 25) plus total academic credit hours taken at the institution (SDF item 65). These hours exclude AP, CLEP, and institutional placement or other test credits awarded. Included in this data are students for whom this is the first year in which there is a record of them having earned a bachelor's degree. It excludes individuals with a prior bachelor's degree from UNC, as measured by any record within the five prior academic years showing SDF item #15 = 3. Students with more than one degree in the same year from the same institutions are counted once. Students with more than one degrees from the same institution, and the multiple degree records contain different attempted hours, the record with the highest attempted hours is selected. Students with multiple majors are only counted once. Campus and UNC Total rates in the chart above are calculated using student-level data.

<sup>&</sup>lt;sup>33</sup> UNCSA converted from quarters to semesters in 2011-12 and are not included in the UNC total average until the semester system was implemented.