Report on Remedial Education in the UW System: Demographics, Remedial Completion, Retention, and Graduation

October 2018

Introduction

In November 1988, the Board of Regents adopted Resolution 5088, requiring students whose mathematics or English is under-prepared for college-level courses to take remedial coursework. The Board required a report on the status of remedial education in the UW System on an annual basis. In 1997, the Board of Regents adopted Resolution 7382, which changed the reporting cycle from one to three years.

New freshmen who are admitted to the University of Wisconsin System come with varying levels of preparedness for success in college-level math and English. Although the majority of new freshmen leave high school with a level of preparation that meets or exceeds that required by their respective UW institution, some students who are admitted have deficiencies that need to be remedied through additional coursework. The UW System requires students who have been identified as being under-prepared in the areas of math or English to take remedial coursework or complete other related activities. The goal of this requirement is to ensure that all new freshmen possess the necessary competencies to succeed in higher education. The individual UW institutions determine how these required remedial classes are offered and oversee the specific curriculum, standards, and methods of instruction.

This report is divided into several sections and appendices. The first several sections include the remediation needs of the incoming fall new freshmen cohort, completion of remediation, and success measures of students requiring and completing remediation. The final section of this report highlights system and institutional efforts to reduce remediation and promote the success of students who required remediation.

- Section I: Trends in Math and English Remediation
- Section II: Math and English Remedial Requirement by Selected Characteristics
- Section III: Math and English Remediation Completion in the First Year
- Section IV: Retention Rates by Math and English Remediation
- Section V: Six-Year Graduation Rates by Math and English Remediation
- Section VI: Efforts to Reduce Remediation and Promote Student Success
- Appendix A: University of Wisconsin System Regent Policy Document: Section IV, 4-8 Remedial Education Policy
- Appendix B: Math Remediation Required and Completed in the First Year by UW Institution
- Appendix C: English Remediation Required and Completed in the First Year by UW Institution
- Appendix D: Math Remediation Required and Completed in the First Year by Student Characteristic
- Appendix E: English Remediation Required and Completed in the First Year by Student Characteristic

Report Highlights

- The percentage of new freshmen requiring math remediation had been above 20% between 2007 and 2013 and declined in more recent years. This percentage was 19.0 in fall 2017. The percentage of new freshmen requiring English remediation decreased from the highest 9.9 percent in fall 2012 to 6.3 percent in fall 2017.

- Students with certain characteristics are more likely to require remediation. Students with a lower high school class rank, underrepresented minority students, older students, and students from low income family tend to require remediation at higher rates.

- The percentage of new freshmen who completed math remediation in the first year was 65 percent or above for the most recent five cohorts. It was the highest for the fall 2014 cohort (71.9%), followed by the 2013 and 2016 cohorts (67.1%). English remediation completion rate in the first year had been above 70% for more than a decade.

- The second-year retention rate of students completing math and/or English remediation in their first year is comparable to the second-year retention rate of students who did not require remediation.

- For students who require math and/or English remediation, completing the requirement in their first year enhances the likelihood of obtaining a bachelor's degree within six years. For fall 2011 full-time new freshmen requiring math remediation, the gap in six-year graduation rates between those who completed the requirement in the first year and those who did not was 34 percentage points. For students requiring English remediation, the gap was 26 percentage points.

- The UW System is involved in an unprecedented effort to reform remedial education and promote student success, such as the Math Initiate. At the system level, a common math placement cut score was implemented with 2017 incoming class. In January 2018, Great Lakes Higher Education Corporation awarded the UW System with a $2.3 million grant over three years to help advance the goals of the Math Initiative. Two of the Math Initiative's goals are to reduce the number of incoming students placed into remedial math and to improve the success of students in remedial math coursework. At the institutional level, UW institutions use creative remedial placement approach, design co-requisite remedial course, and find new pathway to credit-bearing course to reduce the remedial need and improve student success. Summer bridge programs and additional support are also provided to students to help student success

Section I: Trends in Math and English Remediation

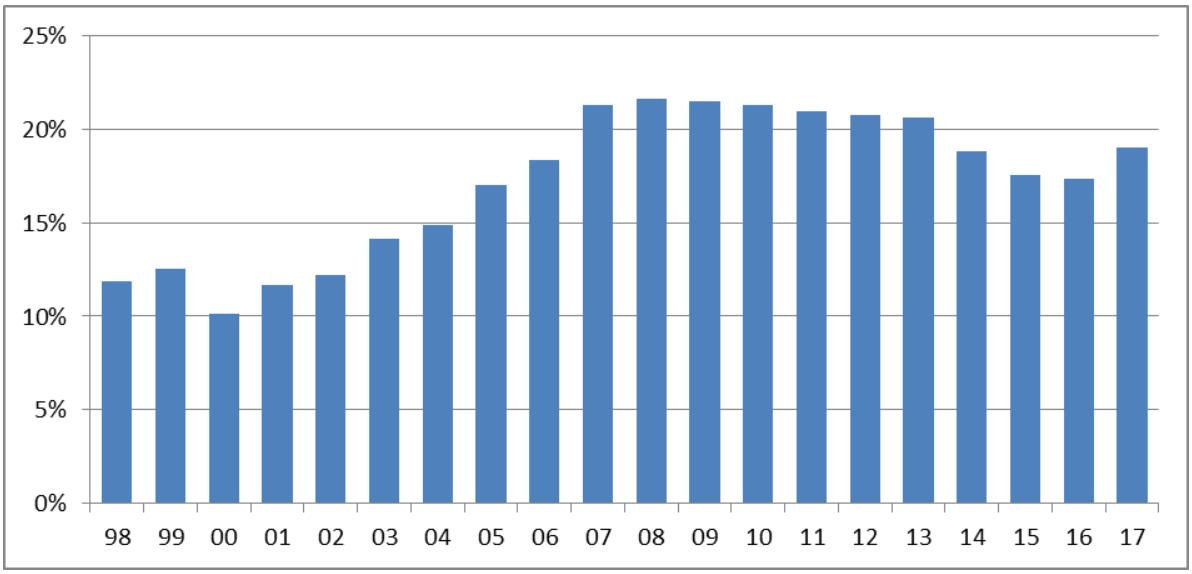
Charts 1 and 2 provide data on the percent of new freshmen placed into math and English remediation from fall 1998 to fall 2017. Over the past twenty years, the percentage of students requiring math remediation was the lowest in fall 2000 (10.2%) and had been increasing until 2008, when the highest percentage of students requiring math remediation was recorded (21.6%). With respect to English remediation, the proportion of students requiring English remediation varied between 9.9 percent (fall 2012) and 6.0 percent (fall 2016) over the past two decades. Appendix B and C provide UW institutional details of new freshmen requiring math and English remediation.

The proportion of students requiring math remediation was above 20% from fall 2007 to fall 2013. It continued to decline from fall 2009 to fall 2016 and then climbed again in fall 2017 to 19.0 percent. Effective with the 2017 incoming class, the UW System adopted a common math placement policy. Implementation of the new policy contributed to the increase between fall 2016 and fall 2017.

The percentage of new freshmen requiring English remediation continued to decrease from fall 2012 when the highest percentage (9.9%) was recorded to the lowest percentage in fall 2016 (6.0%). In 2017, 6.3 percent of entering new freshmen required English remediation.

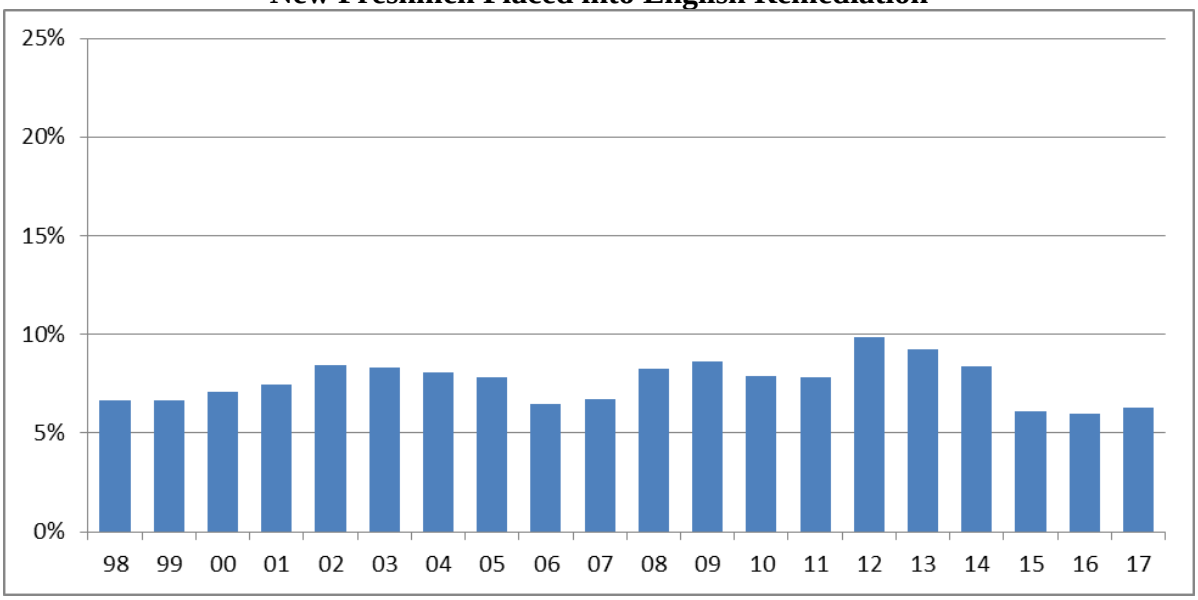
Chart 3 provides data on the percent of new freshmen placed into both math and English remediation from fall 1998 to fall 2017. In fall 2017, 3.4 percent of new freshmen required both math and English remediation. Over the last two decades, the percentage of new freshmen requiring both math and English remediation was the highest in fall 2012 (6.1%) and was the lowest in fall 1999 and 2016 (3.1%).

Chart 1
New Freshmen Placed into Math Remediation



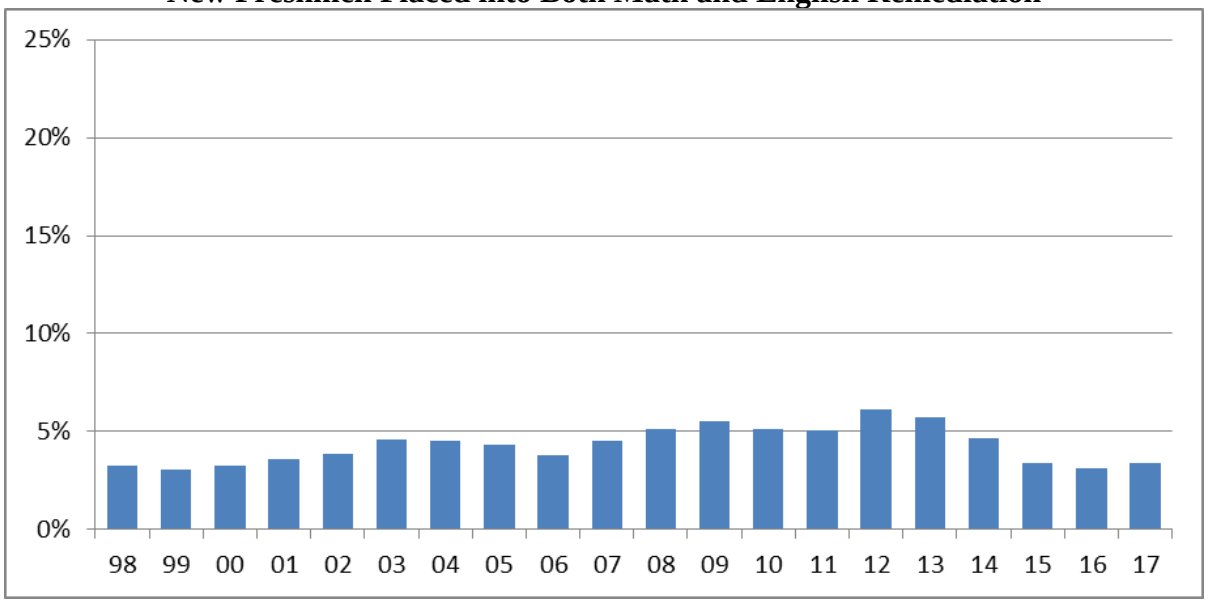
Note: In fall 2017, UW System implemented common cut score placement for placing students out of remedial math. Prior to 2017, UW institutions use incoming students' scores on the UW System Math Placement Test, ACT/SAT Math subscores, or a combination of these scores to determine if mathematics remediation is needed.

Chart 2
New Freshmen Placed into English Remediation



Note: UW institutions use incoming students' scores on the UW System English Placement Test, ACT/SAT English subscores, or a combination of these scores to determine if English remediation is needed. Cutoff scores for English remediation differ across the UW institutions and may change over years.

Chart 3
New Freshmen Placed into Both Math and English Remediation



Note: In fall 2017, UW System implemented common cut score placement for placing students out of remedial math. Pior to 2017, UW institutions use incoming students' scores on the UW System Math Placement Test, ACT/SAT Math subscores, or a combination of these scores to determine if mathematics remediation is needed. And UW institutions use incoming students' scores on the UW System English Placement Test, ACT/SAT English subscores, or a combination of these scores to determine if English remediation is needed.

Section II: Math and English Remedial Requirement by Selected Characteristics of New Freshmen

Charts 4 and 5 show the percentages of new freshmen who were placed into remediation in relation to demographic and academic variables, combining four years of data from fall 2014 to fall 2017. Appendix D and E provide the year-specific numbers and percentages of new freshmen requiring remediation by selected student characteristics.

A higher percentage of females were required to take math remediation (males 15.7% and females 20.3%). Conversely, a slightly higher percentage of males were required to take English remediation (males 7.1% and females 6.4%).

The need for remediation is closely related to high school class rank: the higher the student's class rank, the less likely the need for remediation. From fall 2014 to fall 2017, of students who ranked in the lowest quartile of their high school class, 47.6 percent required math remediation and 25.1 percent required English remediation, contrasting sharply with the highest quartile in which 7.2 percent required math remediation and 1.8 percent required English remediation. Note that the percentages provided in this paragraph are based on students whose high school rank was available (60.9% of total new freshmen in fall 2017).

Underrepresented minority (URM) students include those who indicated African American, American Indian, Hispanic/Latino(a), or Southeast Asian, alone or in combination with other race/ethnicities. New freshmen who are URM students were more likely to require math remediation (32.1%) and English remediation (15.2%) than other groups of students. Among URM students, African Americans were most likely to require math remediation (46.4%) and English remediation (22.9%).

New freshmen age 20 and over were more likely to require math and English remediation than students age 19 and below. For the most recent four cohorts combined, 39.2 percent of students age 20 and over required math remediation while 17.4 percent of students age 19 and below required math remediation. Similarly, 13.3 percent of students age 20 and over were required to take English remediation while 6.5 percent of students age 19 and below required English remediation.

New freshmen who received a Pell Grant have a higher rate requiring math and English remediation than non-Pell recipients. Of new freshmen who received a Pell Grant, 26.8 percent required math remediation and 11.5 percent required English remediation. This compares to 14.8 percent of non-Pell recipients requiring math remediation and 5.2 percent of non-Pell recipients requiring English remediation.

Chart 4
New Freshmen Placed into Math Remediation
by Student Characteristic
Fall 2014 to Fall 2017 Combined

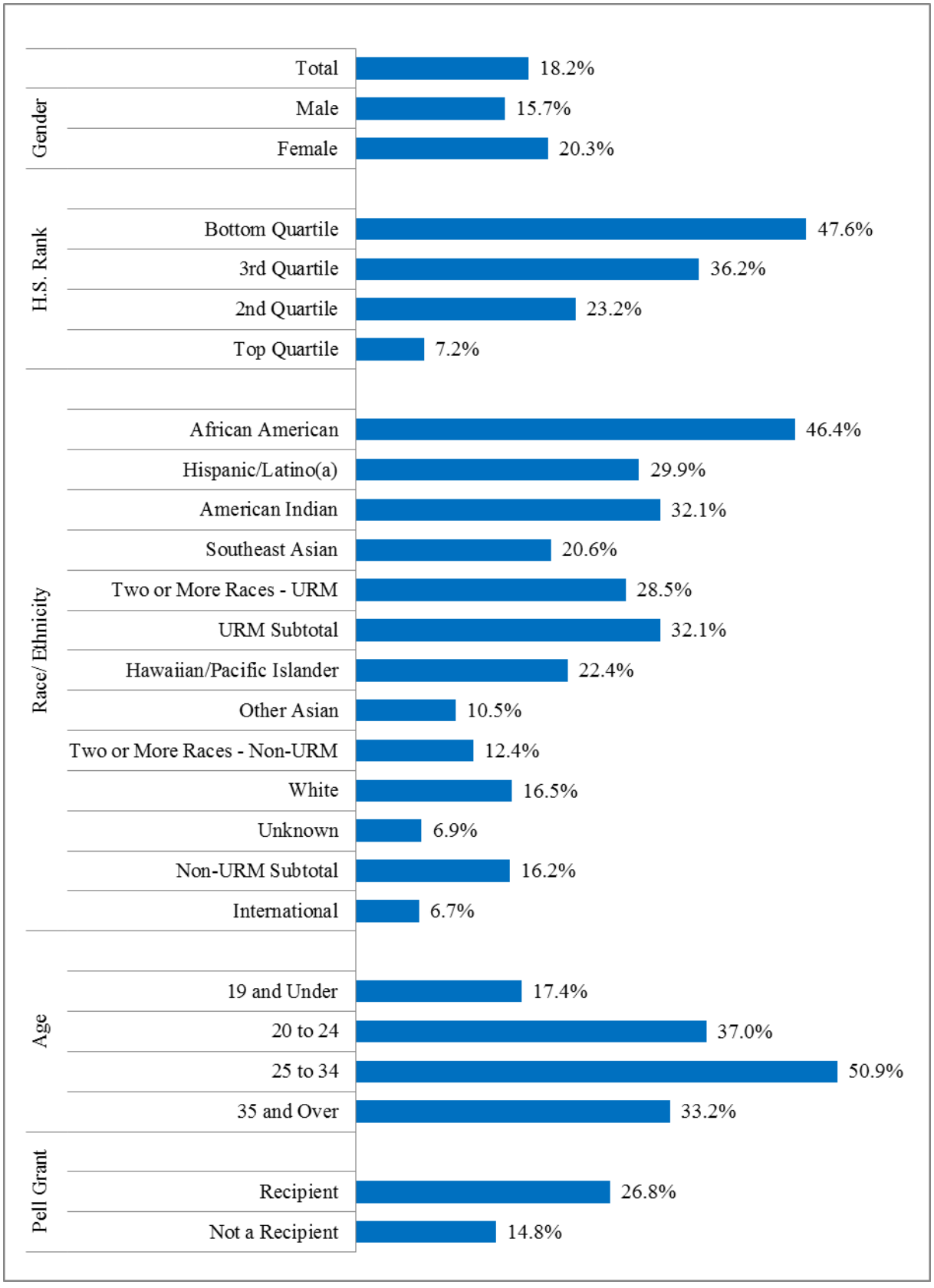
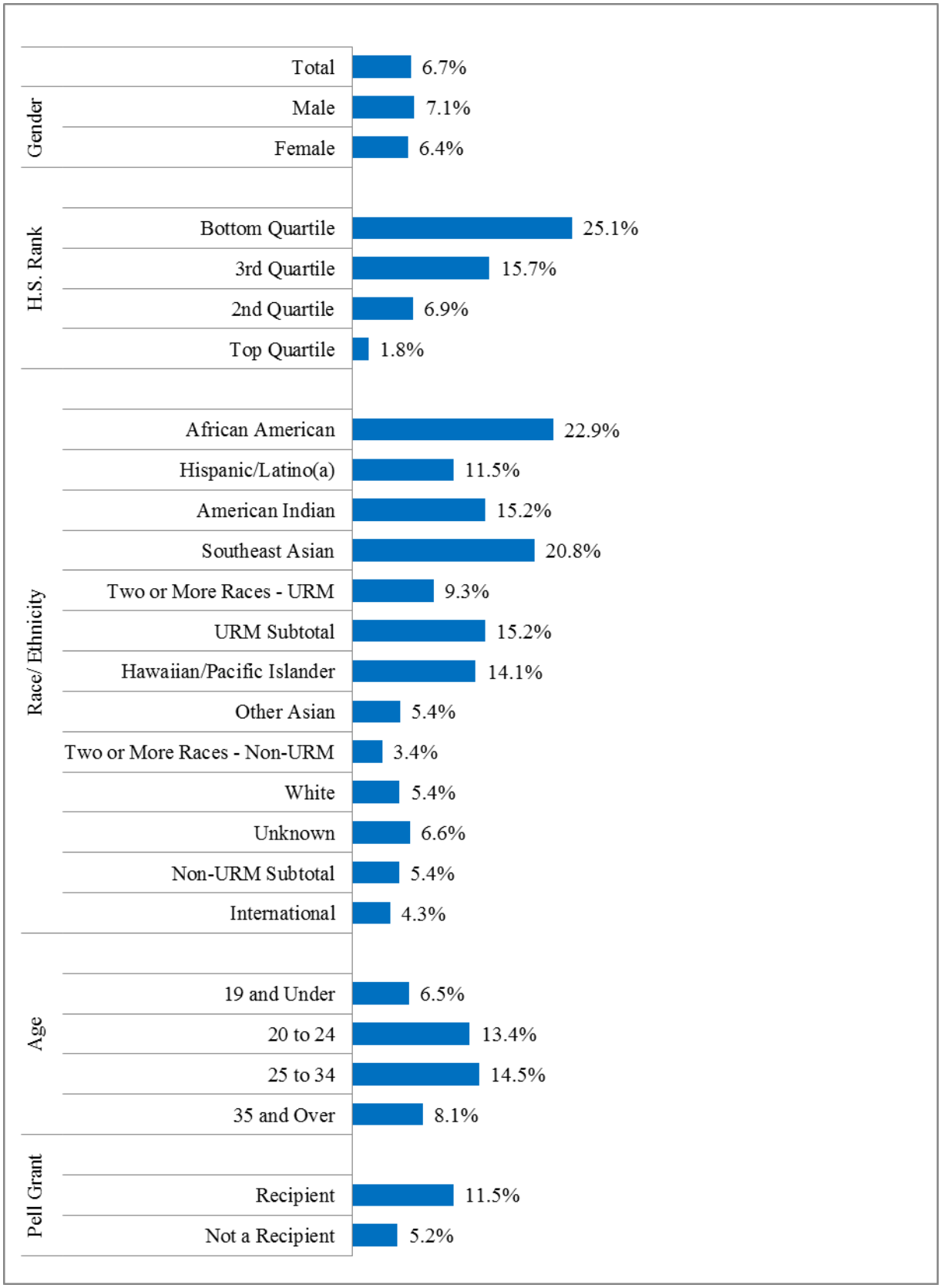


Chart 5
New Freshmen Placed into English Remediation
by Student Characteristic
Fall 2014 to Fall 2017 Combined



Section III: Math and English Remediation Completion in the First Year

Charts 6 and 7 provide trend data for the proportion of new freshmen who completed remediation in the first year from fall 1997 to fall 2016. Over the last two decades, the percentage of new freshmen who completed math remediation in the first year went up steadily and was 65 percent or above in the last five years. During the same period, first-year English remediation completion rate was above 60 percent in all years and was above 65 percent in all but the last two years. Appendix B and C provide UW institutional details of new freshmen who completed remediation in the first year.

For new freshmen requiring math remediation, the fall 2014 cohort had the highest first-year math remediation completion rate (71.9%), followed by the 2013 and 2016 cohorts (67.1%). First-year English remediation completion rate had been above 70 percent for more than a decade. The decrease of more than 10 percentage points in the English remediation completion rate from 2014 to 2015 is the largest decrease in more than two decades.

Chart 6
Math Remediation Completed in the First Year

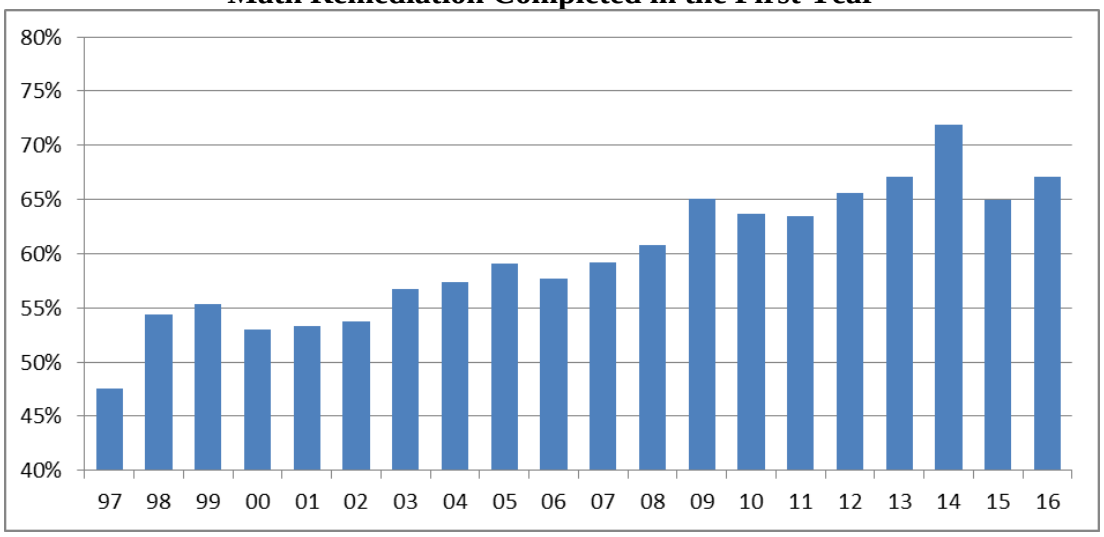
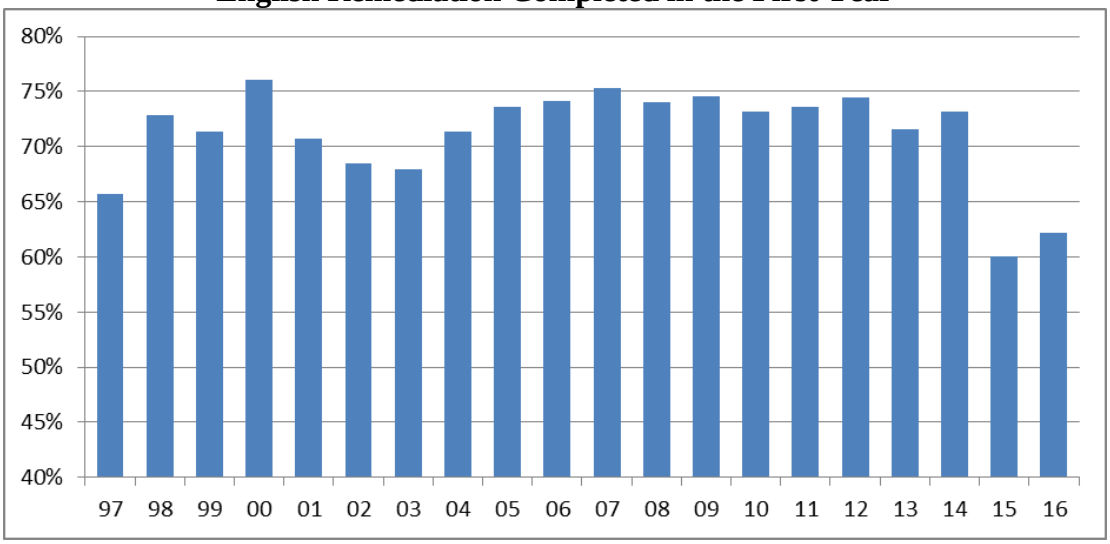


Chart 7
English Remediation Completed in the First Year



Charts 8 and 9 provide the percentages of new freshmen requiring and completing remediation in the first year by selected student characteristics. The charts combine data from fall 2014 through fall 2016. For year-specific data, see Appendix D and E.

In general, female students were more likely to complete remediation than male students. Seventy (70.3) percent of female students completed math remediation in the first year and 68.8 percent of female students completed English remediation. The proportion was 64.9 percent and 63.3 percent for male students.

Remediation completion is positively related to high school class rank. The higher the student's class rank, the more likely the student is to complete remediation. Of the students who were placed into math remediation, 76.0 percent of those in the top class quartile completed the requirement while 48.1 percent of those in the bottom class quartile completed the requirement within the first year. For English remediation, this proportion was 72.5 percent and 51.8 percent respectively for students in the top and bottom class quartile.

Underrepresented minority (URM) students include those who indicated African American, American Indian, Hispanic/Latino(a), or Southeast Asian, alone or in combination with other race/ethnicities. For new freshmen requiring remediation, URM students were less likely to complete math remediation during their first year (64.1%) than non-URM students (69.3%). There is no gap in English remediation completion between URM and non-URM students.

Younger students are more likely to complete remediation in their first year than older students. Sixty-nine percent (69.1%) of students age 19 and below completed math remediation while 56.3 percent of students age 20 and over completed math remediation. Similarly, 67.3 percent of students age 19 and below completed English remediation while 49.3 percent of students age 20 and over completed English remediation.

Gaps in remediation completion is not pronounced between students who didn't receive a Pell Grant and Pell Grant recipients. Pell Grant recipients even had a slightly higher English remediation completion rate (67.3%) than non-Pell Grant recipients (65.1%).

Chart 8
Math Remediation Completed in the First Year
by Student Characteristic
Fall 2014 to Fall 2016 Combined

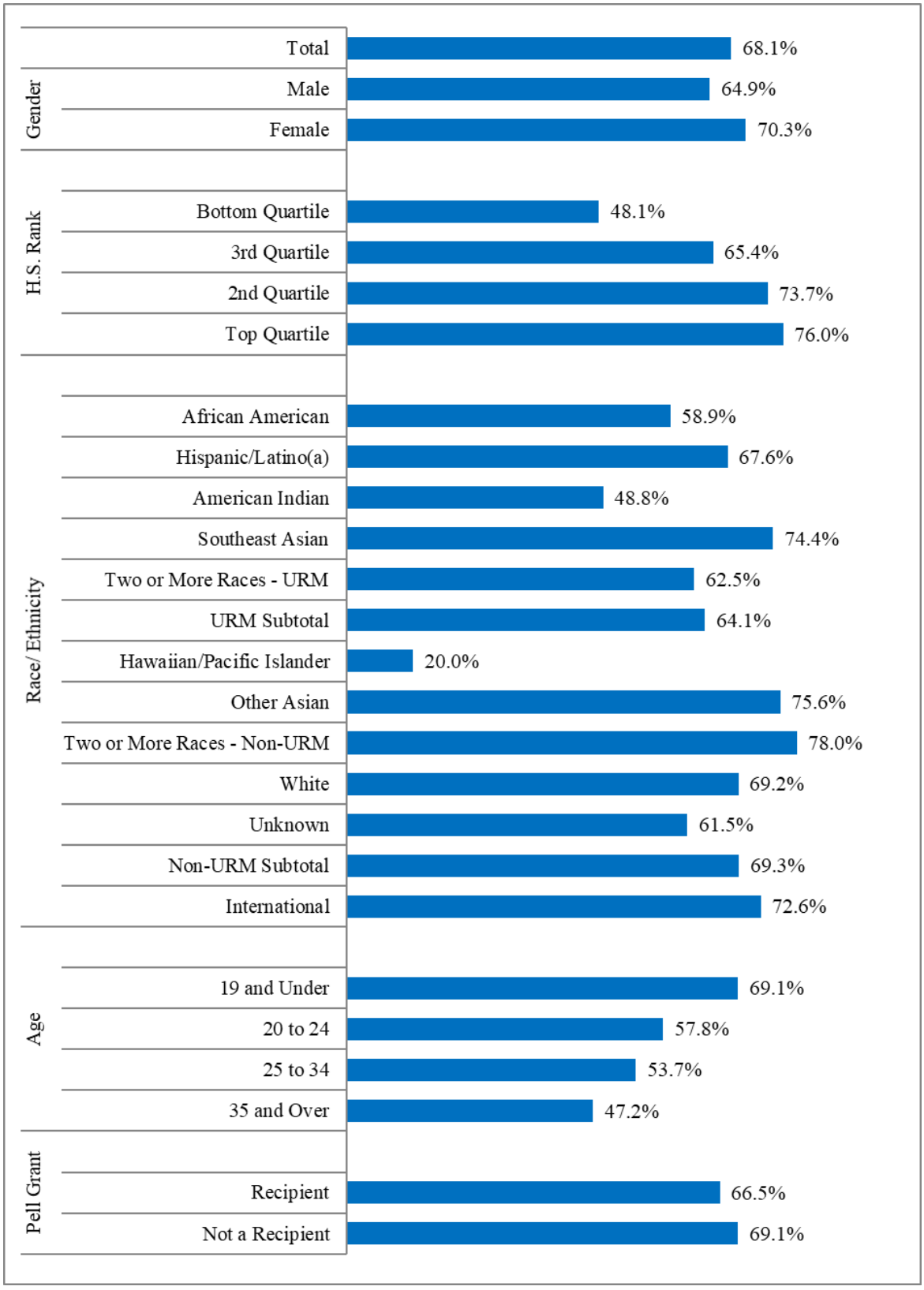
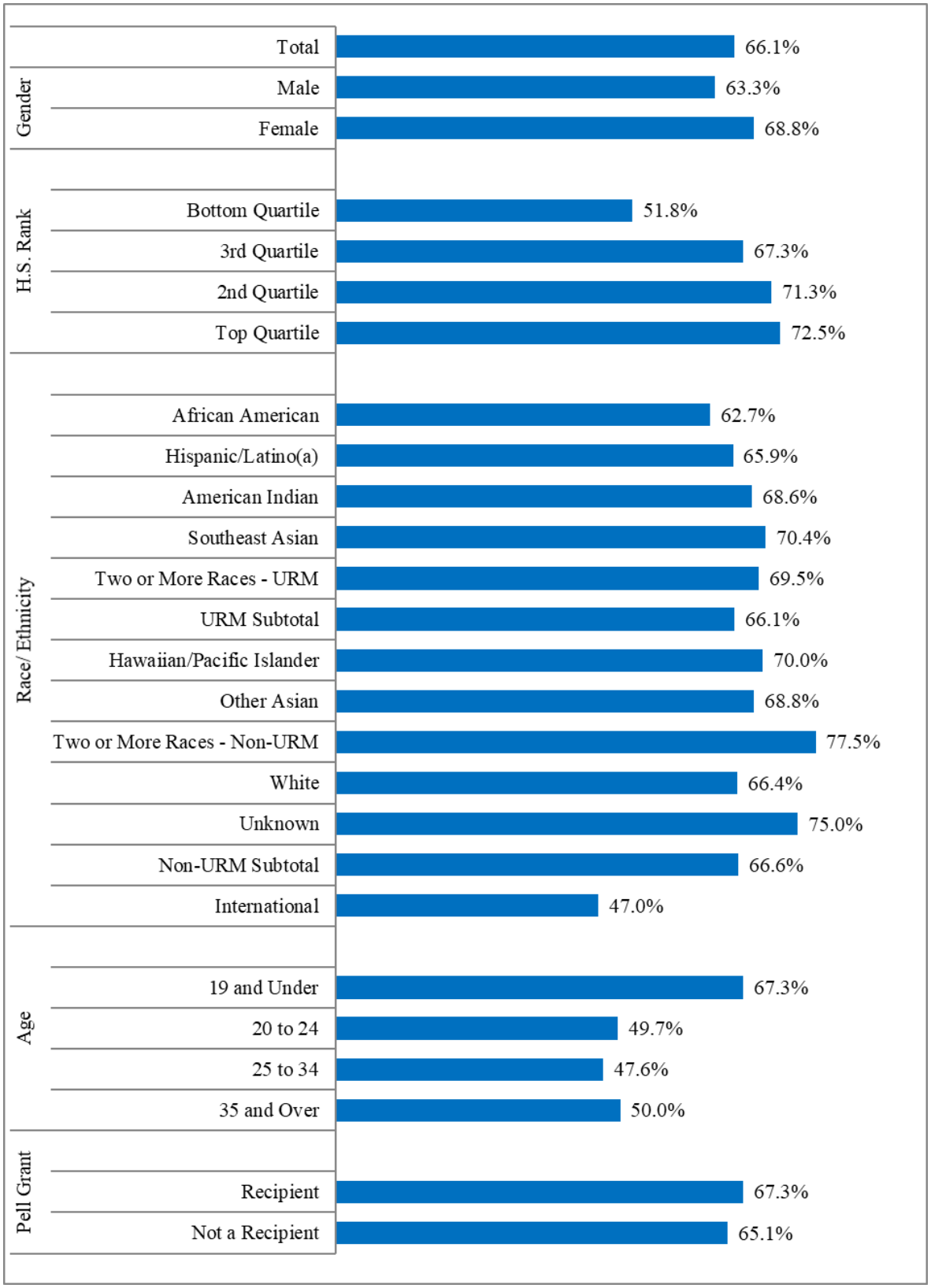


Chart 9
English Remediation Completed in the First Year
by Student Characteristic
Fall 2014 to Fall 2016 Combined



Section IV: Retention Rates by Math and English Remediation

Figures 1 and 2 exhibit second-year retention rates of fall 2016 new freshmen. Comparisons are presented regarding the retention rates of students who required remediation and those who did not. Further comparisons are shown among those who required remediation with respect to the completion of this requirement. Figure 1 presents retention rates in relation to math remediation; Figure 2 presents retention rates in relation to English remediation.

The figures show that students who required remediation were less likely to be retained to the second year than students who did not require remediation. However, for those who required and completed remediation during their first year, retention rates were comparable to the rates for the students who did not require remediation. For students who required and completed math remediation, 76.2 percent were retained to the following year, while only 43.6 percent of those who required but did not complete the requirement were retained. Similarly, for students who required and completed English remediation, 71.4 percent were retained to the following year, compared with only 40.6 percent of students who required but did not complete remediation.

This finding may indicate the positive effect of the remediation programs offered at UW institutions on retention rates. Other factors that may influence these outcomes include differences among students in the number of semesters they are enrolled during the first year and student support services which provide training and other assistance to students who need improved study techniques, learning strategies, and other higher education survival skills.

Key Findings

Figure 1 (Math)

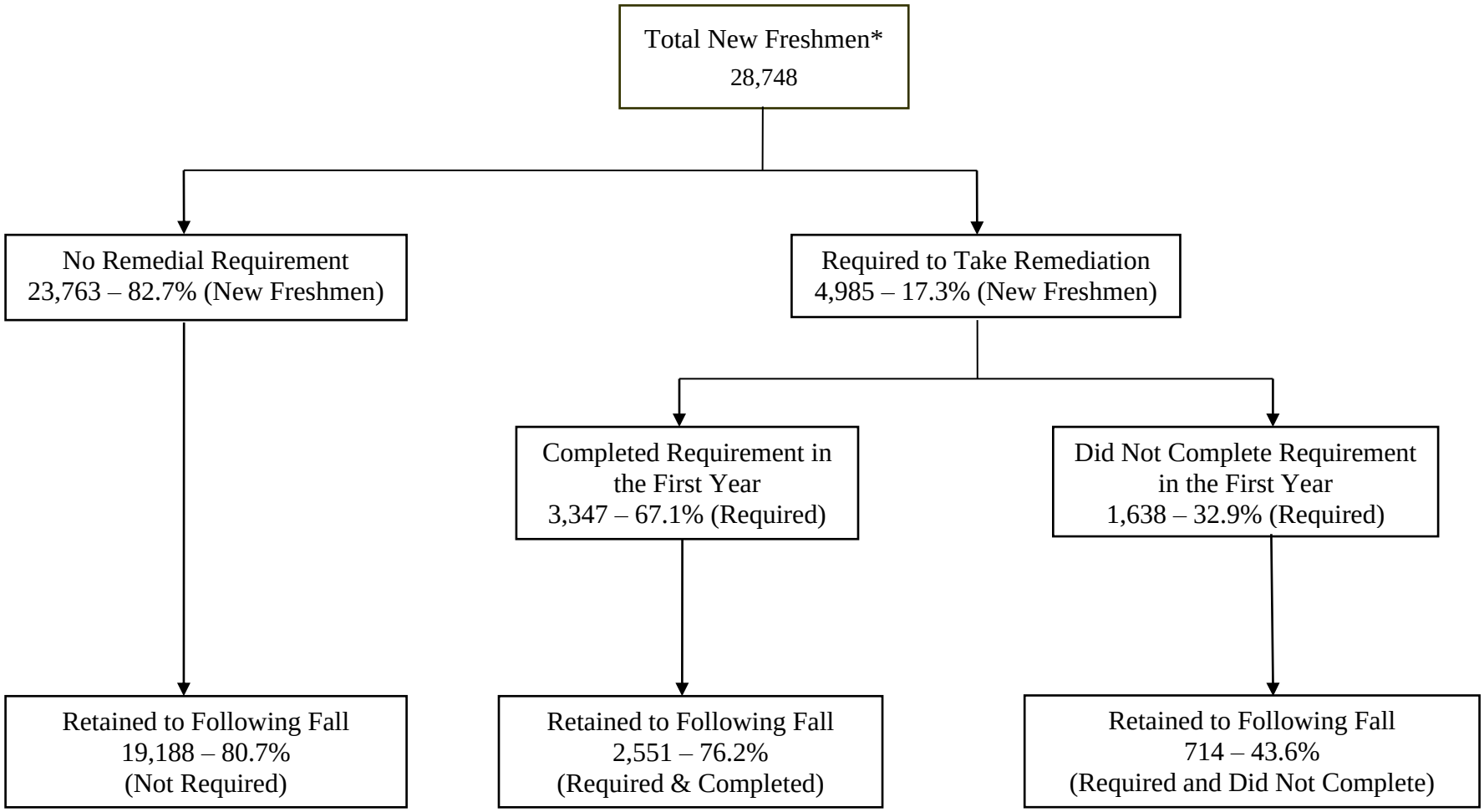
- Math remediation was required by 17.3 percent of new freshmen in fall 2016.
- Of those placed into math remediation, 67.1 percent completed the requirement during their first year.
- Of those who required and completed math remediation during their first year, 76.2 percent were retained to the second year, compared with 43.6 percent for those who did not complete the requirement during their first year.
- Of the new freshmen who did not require math remediation, 80.7 percent were retained to the second year.

Figure 2 (English)

- English remediation was required by 6.0 percent of new freshmen in fall 2016.
- Of those placed into English remediation, 62.2 percent completed the requirement during their first year.
- Of those who required and completed English remediation during their first year, 71.4 percent were retained to the second year, compared with 40.6 percent for those who did not complete the requirement during their first year.
- Of the new freshmen who did not require English remediation, 79.3 percent were retained to the second year.

Figure 1

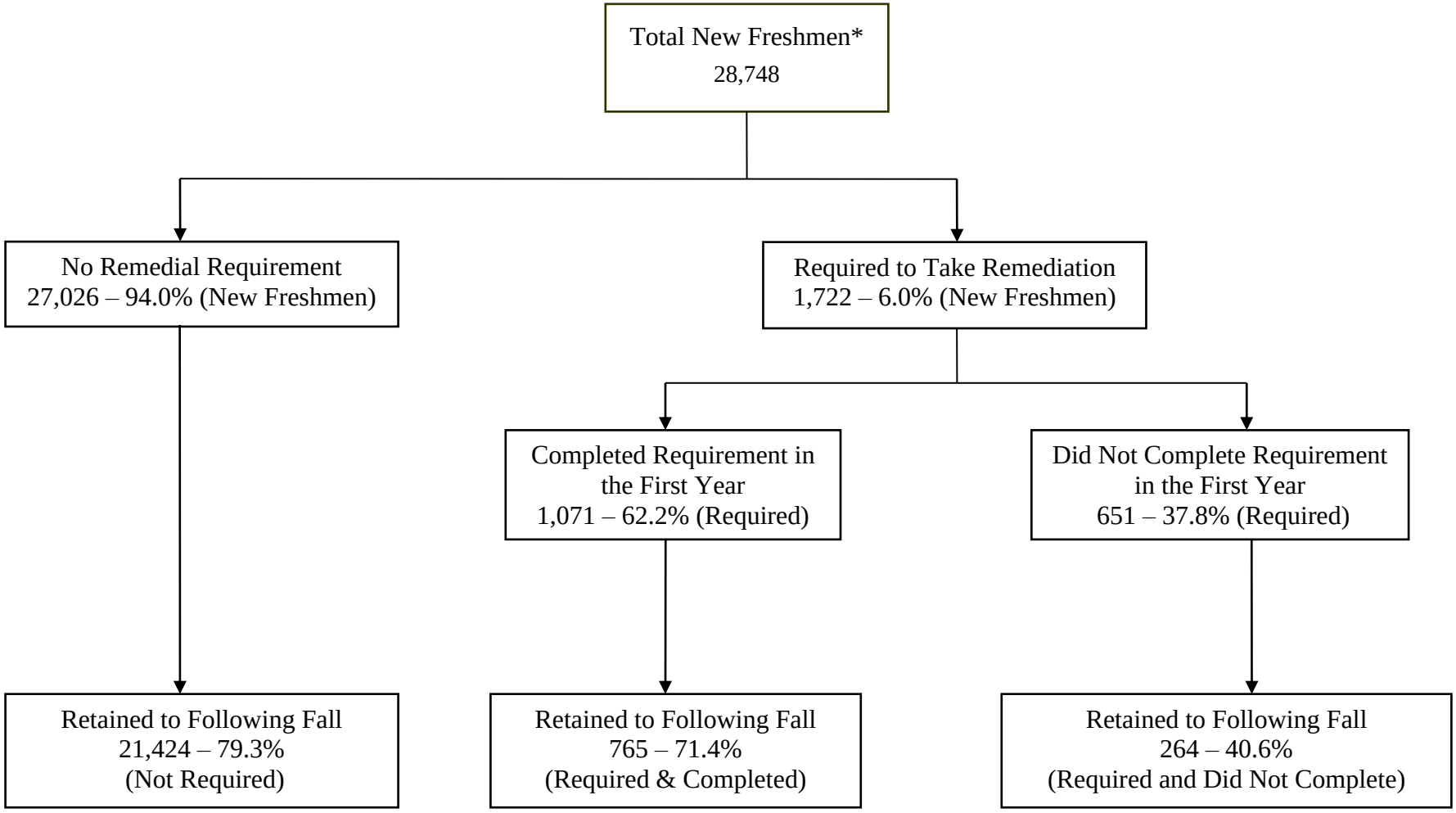
Second Year Retention Rate at Institution Where Started for New Freshmen Entering Fall 2016 by Completion of Math Remedial Requirement



* Full-time and part-time new freshmen were included.

Figure 2

Second Year Retention Rate at Institution Where Started for New Freshmen Entering Fall 2016 by Completion of English Remedial Requirement



* Full-time and part-time new freshmen were included.

Section V: Six-Year Graduation Rates by Math and English Remediation

Figures 3 and 4 exhibit six-year graduation rates of new freshmen entering full-time in fall 2011. These graduation rates are for all students who started at one UW institution and graduated from any institution within the UW System. Comparisons are presented regarding the graduation rates of students who required remediation and those who did not. Further comparisons are shown among those who required remediation with respect to the completion of this requirement. Figure 3 presents six-year graduation rates in relation to math remediation; Figure 4 presents six-year graduation rates in relation to English remediation.

While graduation rates of new freshmen placed into remediation are lower than those of new freshmen who were not required remediation, a significant percentage of students requiring remediation successfully complete their undergraduate education. Since all students placed into remediation are required to complete their remediation long before graduation, it is difficult to isolate the specific impact of remedial programs on the ability to complete a baccalaureate degree within six years. There are a variety of additional intervening factors that may influence a student's likelihood of graduating with a baccalaureate, including finances, family obligations, social issues, employment opportunities, and personal motivation.

Key Findings

Figure 3 (Math)

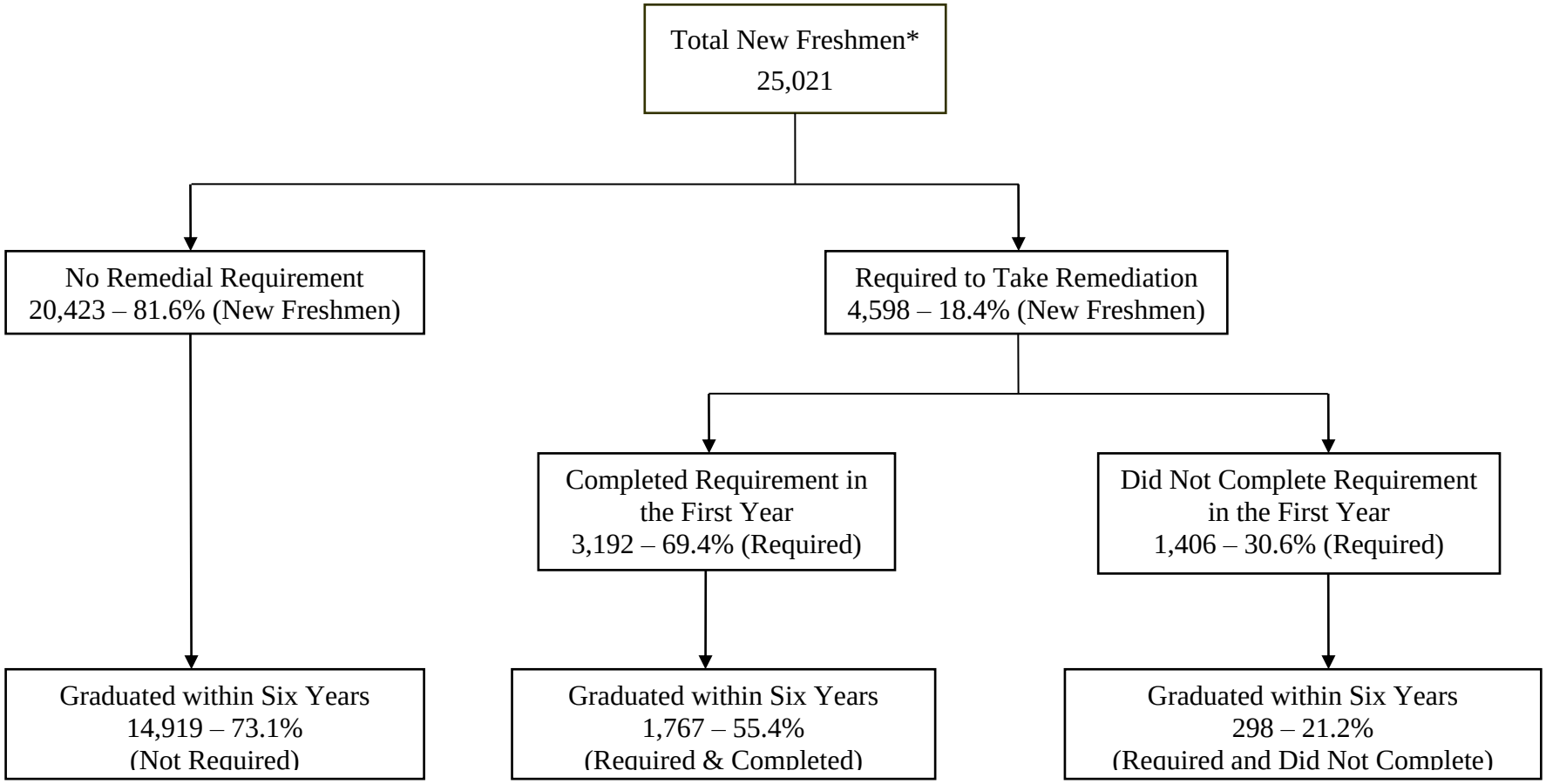
- Math remediation was required by 18.4 percent of new freshmen entering full-time in fall 2011.
- Of those placed into math remediation, 69.4 percent completed the requirement during their first year.
- Of those who required and completed math remediation during their first year, 55.4 percent graduated in six years, compared with 21.2 percent for those who did not complete the requirement during their first year.
- Of students who did not require math remediation, 73.1 percent graduated in six years.

Figure 4 (English)

- English remediation was required by 6.4 percent of new freshmen entering full-time in fall 2011.
- Of those placed into English remediation, 83.8 percent completed the requirement during their first year.
- Of those who required and completed English remediation during their first year, 39.7 percent graduated in six years, compared with 13.5 percent for those who did not complete the requirement during their first year.
- Of students who did not require English remediation, 70.1 percent graduated in six years.

Figure 3

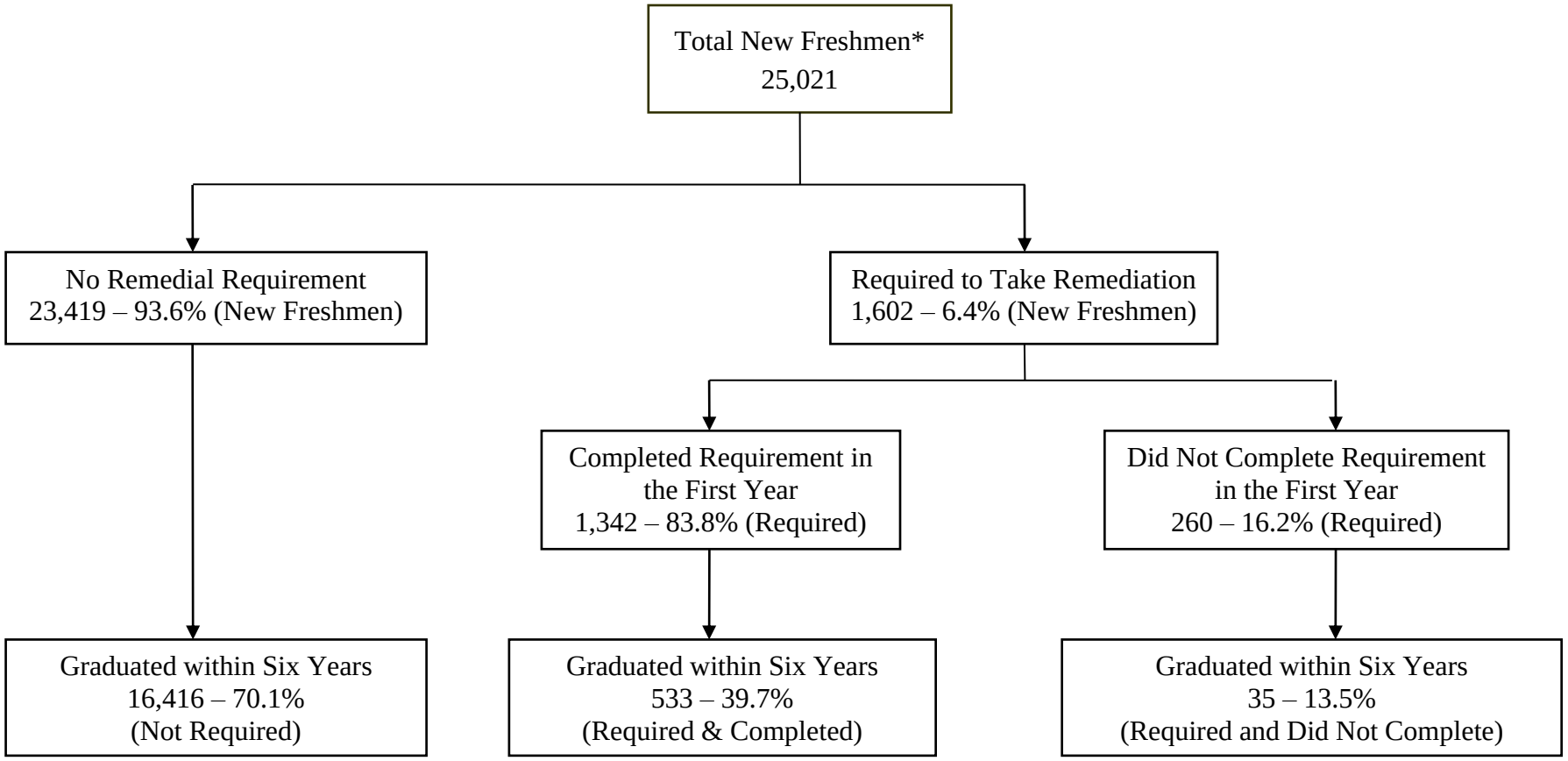
Six-Year Graduation Rate at Any UW Institution for Full-Time New Freshmen Entering Fall 2011 by Completion of Math Remedial Requirement



* Full-time new freshmen at UW 4-year institutions are included.

Figure 4

Six-Year Graduation Rate at Any UW Institution for Full-Time New Freshmen Entering Fall 2011 by Completion of English Remedial Requirement



* Full-time new freshmen at UW 4-year institutions are included.

Section VI: Efforts to Reduce Remediation and Promote Student Success

UW institutions are engaged in a variety of efforts to reduce the need for math and English remediation as well as to ensure that the students who need remediation are retained and graduate.

Examples of efforts to reduce the need for math and English remediation include:

- Common math placement cut score

  Effective with the 2017 incoming class, the UW System has a common policy and practice for placing students into credit-bearing math courses. Students who score 470 or higher on the UW Math Placement Test (MPT) are guaranteed placement into credit-bearing math courses. The new math cut score policy also encourages institutions to find alternatives to traditional remedial math courses for students who score below 470. Alternatives include, but are not limited to, placing students based on additional measures of math competency, bridge programs or other support prior to matriculation, and corequisite remediation. Greater use of these and other practices are expected to reduce remedial math placement.

- Multiple measures of math placement

  Several UW institutions consider ACT math scores and grades in high school math courses in addition to UW Math Placement Test results when determining placement into a remedial vs. a credit-bearing math course. In September 2017, the UW System Office of Academic and Student Affairs awarded approximately $64,000 to three UW institutions to conduct statistical analyses of the potential impact of multiple measures of math placement. Funding for additional UW institutions will be available in 2018-19 through the UW System Math Initiative.

- UW System Math Initiative

  The UW System Math Initiative (https://www.wisconsin.edu/math-initiative/) is a multi-year effort designed to help students receive relevant math education that better aligns to their program of study, saves financial resources, and ultimately reduces their time to degree. It began in March 2017 with the formation of a Math Steering Committee to build on the recent implementation of a common cut score for placement into credit-bearing math. In January 2018, the initiative secured a $2.3 million grant over three years from Great Lakes Higher Education Corporation. Two of the Math Initiative's five goals are to reduce the number of incoming students placed into remedial math and to improve the success of students in remedial math coursework.

- New remedial placement approaches

  In 2017-18, the English Composition program at UW-Green Bay revised its developmental English program. The revision sought to use different placement criteria to place all students into credit-bearing courses designed to help them succeed and meet the University's English competency requirements. Specific sections of existing English Composition courses (Eng Comp 100) were redesigned to support students in need of additional support. Several of these sections also focus on specific themes such as race and class, the immigrant experience, issues in mental health. Effectively, all students have been placed in non-remedial, credit-bearing English courses, although some students are still required to take a co-requisite support course (Eng Comp 095) along with Eng Comp 100.

In 2015, UW-Milwaukee's department of English examined best practices nationwide and developed a "mainstreamed" basic writing model in which students who needed remediation were assigned to a 4-credit section of English 100. At the same time, English 095, a non-credit course, was eliminated. Students in English 100 are succeeding at a higher rate, with the added benefit to students that they are making substantive progress towards graduation and not adding additional costs or time to degree.

UW-Oshkosh has developed a new course, WBIS (Writing Based Inquiry Seminar) 099. Previously, students' scores on the Placement Test placed them into either WBIS 188 (first-year composition course) or English 100 (a 3-credit remedial course that must be completed before taking WBIS 188). For students who score in the higher part of the remedial range, they now have the option of taking WBIS 188 concurrently with WBIS 099, which consists largely of regular sessions with Writing Center tutors. This allows students to stay on track with their cohort as they move through the general education program.

Effective fall 2014, UW-Parkside eliminated all remedial reading and writing courses. The lowest English placement is now the first credit bearing composition course, ENGL 100. To provide additional support to the lower testing students in ENGL 100, class sizes were reduced from 26 to 22, a professional development workshop was held for faculty and instructional staff, and additional resources were provided for the training and supervision of writing tutors.

Starting in fall 2017, the Freshmen English program at UW-Whitewater has offered a new "stretch" course to move significant numbers of students directly into a credit-bearing first semester English course. The English program developed a four-credit, first semester English course (ENGLISH 100 Intensive College Writing and Writing) for students whose ACT English sub-scores fall 1-2 points below the remedial cut-off. The additional one credit in ENGLISH 100 allows instructors to devote more time to instruction and practice in college-level writing. Since the launch of ENGLISH 100 in fall 2017, 344 students were able to by-pass the remedial level English course.

- Co-requisite remedial courses

Starting in fall 2017, when the UW System Mathematics Placement Exam was restructured, UW-Eau Claire introduced a 1-credit remedial course titled "Supplemental Math Instruction," with the idea that students whose placement scores are below the new "cut-score," but not too low, can nevertheless enroll in a credit-bearing gateway mathematics course if they also co-enroll in the 1-credit course. This co-enrollment model is estimated to reduce the population of students who would otherwise not be allowed to take a credit-bearing gateway mathematics course by about 25%.

The English department at UW-La Crosse has moved to a co-requisite remediation beginning from fall 2018. English 100 is taught as a three-credit supplement to English 110 for students who would have previously been placed in remedial courses. Any student that places below 330 on the placement test is automatically enrolled in English 100. Students placing between 330 and 350 complete summer work including a survey about writing habits and a short essay. Multiple measures are used to determine whether these students are automatically enrolled in English 100. The course includes embedded tutoring.

In fall 2014 UW-Milwaukee introduced the pathway for non-STEM students, Math 92 and 102 (Mathematical Literacy for College Students, I and II). In spring 2018, full scale co-requisite

remediation in this pathway was implemented. The vast majority of students took 92 and 102 in parallel completing their remediation and their first math requirement in a single semester. Over 83% of students earned a C or better in Math 102.

At UW-River Falls, the department of English reduced the number of students taking a semester of remedial English by introducing a 1-credit co-requisite course (ENGL 99) that could be taken by students scoring in the top band of the cut-off score along with a for-credit ENGL 100 (the usual first course in the two-course sequence of ENGL 100-ENGL 200 of Written Communication General Education requirement). Because of this effort, the number of students delayed by a full-semester of remedial work was cut down by approximately 50%.

The Math and Computer Science department at UW-Superior introduced a "co-requisite" section of elementary statistics (MATH 130) in the spring of 2017, allowing students who place in developmental math to enroll immediately in college credit-bearing statistics with one extra lecture per week compared to the non-co-requisite version. This effort has been successful in that students in the co-requisite sections showed no significant under-performance compared with students in the regular sections of MATH 130. UW-Superior also linked WRIT 099 with WRIT 102 as a 5-credit co-enrollment course package. Students are co-enrolled in WRIT 099 for two credits, which serves as a "lab" for their learning in the 3- credit WRIT 102 course. This arrangement allows developmental students to maintain the same degree progress as their mainstream peers.

In fall 2017, UW-Whitewater expanded its Moving UP program to enroll 120 students, double the number of students from the previous year. This program uses a co-requisite remediation model where students placed into developmental mathematics based on the UWMPT are enrolled into a credit-bearing course, Math 141 (Fundamentals of College Algebra), and a 1-credit developmental workshop. Aside from providing just-in-time support of the course content, the workshop incorporates strategies to promote a growth mindset, meta-cognition and better study skills. Supplemental instructors work closely with the course instructor to assist in the classroom, hold tutorial sessions, and provide one-on-one support. Also in fall 2017, UW-Whitewater offered Math 139, a Quantitative Reasoning course, that created a new mathematics pathway for students not majoring in STEM or business. In fall 2018, selected students in this pathway and placed into developmental mathematics were able to enroll directly into Math 139 with its own developmental workshop component through a similar Moving UP program.

- New pathway to credit-bearing courses

During the 2016-17 academic year, the Math department at UW-Green Bay, in collaboration with Advising, Student Success, the Learning Center, and the Provost's Office, revised its remedial math program into a developmental math program. Previously there was a single pathway to meet math competency. Now depending on academic direction, students have the option of meeting the math competency requirement in three ways. And more students now are placed into credit-bearing courses that meet math competency requirements.

UW-River Falls is piloting a strategy of retesting students who do exceptionally well in Math 10 (remedial course) and offering them the option of going directly to a credit bearing course rather than continuing to Math 30 (remedial course). The university is also piloting a way of splitting Math 30 into two half-semester classes, with a plan of requiring only the first half of the course for students whose math pathway is a non-algebra (non-calculus). Students are provided an option to retake the math-placement examination after completing a Math MOOC.

UW-Stout offers a general education approved Elementary Statistics course. This course does not have a math placement requirement, and this will continue in the future. The university's general education requirements do allow a student to meet the requirements by taking that course along with other non-mathematics coursework, thus allowing an option that does not require remedial mathematics coursework. While a number of majors do require specific mathematics courses, a growing number of students chose this Statistics only option.

- Partnership with high schools and technical colleges

  UW-Green Bay has partnered with Northeast Wisconsin Technical College (NWTC) and the Green Bay Area Public Schools (GBAPS) to expand student success in high school, college, and university. While the principle focus of this partnership is on delivering college credit in high school, a significant part also focuses on reducing the need for remedial and developmental math and English courses. During the 2017-18 academic year, representatives from the math and English Composition programs met regularly with representative from NWTC and GBAPS to discuss math and English competency. Much of the year focused on developing a better understanding of each other's programs and expectations and on aligning learning outcomes.

Examples of efforts to ensure the success of students who need remediation include:

- Summer bridge programs

  Springboard is a summer program for new freshmen who place into remedial mathematics at UW-Eau Claire. When such a student comes for orientation in June, they are given the opportunity to participate in this program with the anticipation that they will be able to avoid the need to take a remedial mathematics course in the fall semester. This bridge program was piloted in summer 2014. For the next summer, UW-Eau Claire was supported by a grant from the UW System Developmental Education Research and Development Program to expand Springboard. This project also provides supplemental academic support to the students who passed the exam.

  UW-La Crosse's FastTrack program is a summer program designed to give incoming first-year students the opportunity to move forward from remedial math placement into a credit-bearing course. Originally funded through a UW System Growth Agenda grant, the FastTrack program utilized the award-winning UW System College Readiness Math MOOC in conjunction with a face-to-face component. Participants move to campus a week prior to fall semester classes. The students participate in math workshops and community building activities. There are two cohorts of students, about 300 students total, that go through the program every summer. At the end of the week, the students retake the UW System Mathematics Placement Test.

  The Math department in conjunction with the Registrar's Office conducts a summer bridge program called Panther Math Prep (PMP) for incoming UW-Milwaukee first-year students via an online, self-paced program. Participants re-test to try to place up in the math sequence. In 2018, UW-Milwaukee received a grant from UW-System to offer PMP for free to up to 400 students. The program was offered to all new freshman. As a result, more than 300 students signed up, 41% of those (127) re-tested, and 74 students (24% of those who signed up) did retest and place higher.

  In 2015, UW-Parkside piloted a math "move-up" project. Math move-up provides students who place into a remedial math course the opportunity to participate in a free four-week math review

program during the summer. Those who successfully complete the summer program are allowed to bypass the remedial course and enroll in a credit bearing course in the fall. UW-Parkside has now completed four years of this program and a total of 162 students have been served.

SUCCEED, a 3-week transitional college readiness summer bridge program for entering college students at UW-Platteville offers a math enrichment component. Students elected to complete either a computer program called ALEKS (a self-guided math review program in which they can opt to retake the UW System Math Placement Test upon completion) or YouCubed (a math mindset program with a mixture of open-ended math tasks and activities meant to promote a growth mindset among students).

For incoming first-year students, UW-Stevens Point offers a summer math program called FastTrack. FastTrack is a flexible summer program designed to enhance incoming students' mathematical understanding and skills. FastTrack provides students an opportunity to move into a credit-bearing math course. Two options are available: Hybrid FastTrack Cohort (online + summer camp at Treehaven) or Online-only FastTrack Cohort.

A summer Math FastTrack program was inaugurated at UW-Superior in 2017 that has been successful. The majority of students in the program were placed at a higher level in the UW System Math Placement Test before fall classes began. Students who have taken the UW System Math Placement Test prior to early July and have placed in Math 090 or 095 are recruited via email, postcard, and through Summer Orientation and Registration (SOAR) to enroll in the Math FastTrack program. The program involves incoming first year students to complete a 6-week MOOC. Upon completion of this online program, students are moved onto campus/into Superior several days before other freshman to participate in a Math FastTrack "bootcamp" type experience. In this on-campus portion, students are led through intense experiential review sessions with our Math 090 instructor culminating in a retake of the UW System Math Placement Test.

- New delivery models for remedial courses

  For several years, UW-Eau Claire have offered remedial mathematics course using a model termed "emporium" where students learn and work on assignments individually with mathematics faculty and tutors in a drop-in tutoring center, along with the traditional lecture model. In this emporium model, students are required to flexibly schedule a minimum number of hours each week in the drop-in tutoring center, and to take regularly scheduled proctored exams throughout the semester. In this emporium model, assignments and student progress are managed by a mastery-based adaptive learning platform. Beginning in spring 2018, the traditional lecture mode was phased out and now both remedial mathematics courses use the emporium model. The assessment of student success finds that this emporium model has several distinct advantages, including development of student meta-cognition and academic responsibility. Another distinct advantage is that students who place into the lower of the two four-credit remedial mathematics courses can realistically finish both in the same semester.

- Curriculum Changes

  Beginning in fall 2012, the remedial algebra course at UW-Parkside was formally divided into content modules and the requirement for successful completion was changed from a minimum grade over the entire course to demonstrated proficiency in each content module. Additional student

support was provided in the form of an extra class day each week, and follow-up review sessions and opportunities for retesting of failed content modules.

In 2015, the UW-Platteville Mathematics department redesigned its developmental curriculum and reexamined the prerequisites for courses that carry general education credit. As a result, the Mathematics department created a new course, Mathematical Problem Solving. This course combines beginning algebra with college-readiness skills and now serves as a prerequisite for the general education courses. The change of prerequisite from Intermediate Algebra to Mathematical Problem Solving gives general education students entry to a credit-bearing math course upon the completion of at most one remedial math class.

- Additional support for students requiring remedial math or English

In 2017, the Vice Provost for Teaching and Learning at UW-Madison charged a working group with developing strategies to increase timely compliance with completion of developmental Math within the first 30 credits taken on campus. The group worked on two simultaneous strategies, one for continuing undergraduates and another for new students, to ensure that the problems did not continue. For continuing students, the working group reminded students through direct email contacts (with copies to their advisors) about the remediation requirement, the expectation of completion within 30 credits, and that they were expected to enroll as soon as possible. At the same time, strategies for advising new students with remedial math placements at their initial summer advising session were developed. The group explored previous unused functionality in the student information system to prevent course dropping without permission. The working group also identified loopholes that were enabling these students to avoid completion of remedial coursework. All these combined efforts have resulted in better and more timely compliance with the remedial education policy.

UW-Oshkosh requires students who are placed in English 100, a developmental English course, to concurrently complete required additional tutoring sessions in the University Writing Center. These tutoring sessions are scheduled with professional writing coaches in the Writing Center that are scheduled immediately after the face-to-face course in the classroom. Tutoring sessions are integrated with classroom instruction to provide immediate application of course content, and students receive feedback to advance their writing skills.

In 2018, UW-Oshkosh instituted the Aleks (Assessment and Learning in Knowledge Space) system in all developmental math classes. This is a very powerful homework delivery and math skills building software that allows students to remediate their shortcomings in beginning and intermediate algebra in a very efficient and effective way. Students are free to work ahead and reach mastery of the material that will allow some of them to take care of their remedial courses in one semester.

In UW-River Falls, Hawkes Learning is utilized as an independent practice management system. This is a competency-based approach to help students master the content while receiving instant feedback. Beginning from fall 2018, more personalized feedback were given to all quizzes. The quizzes are graded like normal and then a small note is attached to each quiz to help students determine which concepts they are struggling with and should review.

The Tutoring in Math & Science (TIMS) Program at UW-Stevens Point is offered through the Tutoring and Learning Center (TLC) and provides student assistance with remedial math courses. This program offers both group and individual tutoring. Tutors are outstanding undergraduate

students with top grades in their math courses who bring experience, expertise, and enthusiasm. The tutoring and studying lab, MathPad, is another place for students to receive help in remedial math courses. MathPad is a computer lab where students can do their online homework through WebAssign, get immediate feedback on their work, and have a tutor present when they have questions. The lab is physically located next to their instructor's office and permits students to ask questions of the instructor during office hours and then to continue to work nearby on more homework.

The Math Teaching and Learning Center (TLC) program was initiated in 2004 at UW-Stout in response to high failure and withdrawal rates in gateway algebra courses. The Math TLC program provides tutoring from a closely supervised and specially trained staff of student peer tutors. In addition to the dedicated open tutor lab, the Math TLC program provides coordination of content, instruction, course materials, technology, assignments and assessment for the two introductory-level algebra courses Math 010 and 110. Since the spring 2017 semester, the MathTLC has implemented a new course scheduling system whereby students have the hour after their math class free so that students can immediately make use of the tutor lab for further help on the topic discussed that day. Along with this change, a renewed effort has been made to limit class sizes to ensure a highly effective teaching and learning environment. To-date, these modifications to the MathTLC structure have led to improvement in student performance.

A new Math 090 instructor was hired in late December 2017 at UW-Superior. This instructor uses a textbook that is paired with the online ALEKS program. During fall 2018, the instructor moved the classroom to a computer lab and modified course curriculum to include in-class ALEKS work time to assess and remediate math knowledge on-site with students while also providing content knowledge and instruction. Students are also encouraged and occasionally incentivized to attend peer-tutoring sessions in the Math Lab, which is co-located in the same academic building and adjacent to the instructor's office.

From 2015, Campus Tutorial Services (CTS) at UW-Whitewater provided support for students in remedial math and English courses. Foremost, in the fall of 2017 CTS relocated to the Chrisman Success Center, a newly-built 18,390 square-foot three-story facility. The highly functional and easily accessible center provides the space, technology and programs to meet the campus's growing demand for in-depth tutorial support. In addition to students utilizing the walk-in Math and Writing Centers, additional levels of support were offered, upon instructor request, for In-Class Tutors and Supplemental Instruction.

Appendix A

University of Wisconsin System Regent Policy Document

(Source: https://www.wisconsin.edu/regents/policies/remedial-education-policy/)

SECTION IV, 4-8 REMEDIAL EDUCATION POLICY

1. New freshman who are admitted to Institutions of the University of Wisconsin System in accord with criteria approved by the Board of Regents and whose scores on English or mathematics placement or proficiency tests indicate a low probability for success in college level courses in either or both of those subjects shall be required to complete successfully the necessary remedial courses prior to completion of 30 credits. Institutions may grant exceptions to individual students; however, they must clearly document the reasons for such exceptions.
2. Remedial courses in English and mathematics shall not generate credit toward a degree from Institutions in the University of Wisconsin System.
3. Remedial courses in English and mathematics offered by Institutions of the University of Wisconsin System may be taught by faculty and staff they employ, through the University of Wisconsin-Extension, or through contractual arrangements with local VTAE Units. An Institution's remedial courses should be available for students on its campus. The faculty of the University of Wisconsin System shall control the content, standards, and methods of instruction in its remedial courses.
4. The appropriate credit load for all students enrolled in remedial courses will be determined by the Institution. The Institution will be expected to advise students carefully about the appropriate number of credits based on students' high school performance and test scores. Beginning in fall of 1990 each Institution will provide an annual report to System Administration on the number of new freshmen identified as needing remediation in English and/or mathematics and the number who successfully completed remedial courses in English and/or mathematics. The president will use this information to compile an annual report for the Board of Regents. *
5. No later than Fall 1991, all remedial courses in the University of Wisconsin System shall be offered on a fee recovery basis.
6. By October 1989, the University of Wisconsin System shall develop a detailed statement of the minimum college-level skills and competencies students are expected to have in mathematics and English upon entrance to the University. This statement shall be widely circulated and periodically updated. It should form the basis for college-preparatory courses in mathematics and English offered by secondary schools and for remedial courses offered by the University.
7. An initial screening for these competencies shall include admitted freshmen's scores on the ACT and any other additional performance criteria that each University of Wisconsin System Institution may choose. Students who score above the University of Wisconsin System established level on the ACT mathematics and English subtests are expected to have a high probability of success in college-level courses and may be exempted from further testing. For students who score below the University of Wisconsin System-established level, each Institution shall determine the specific instruments and performance criteria used for placement in college-level or remedial courses. Information about the University of Wisconsin System-established level on ACT mathematics and English subtests and each Institution's instruments and performance criteria shall be made available to the secondary schools and to potential University of Wisconsin students.
8. The University of Wisconsin System will cooperate with the Department of Public Instruction in developing a plan for assessing English and mathematics skills of high school students throughout the state. Examination results shall be made available to students, their parents, and their schools. Students whose scores suggest they are unlikely to place into college-level English and mathematics courses upon entering college shall be encouraged to take courses in high school that are designed to improve their English and mathematics competencies and lessen the possibility of their placing into remedial courses.

*Reporting period changed to once every three years by Res. 7382, 2/7/97.

History: Res. 5088 adopted 11/11/88; amended by Res. 5957 and 5958, 11/91.

Appendix B

Math Remediation Required and Completed in the First Year by UW Institution Fall 2014 to Fall 2017

Institution	Fall 2014				Fall 2015				Fall 2016				Fall 2017	
	# Req Rem	% of Total New Freshmen	# Compl	% Compl of Rem Req	# Req Rem	% of Total New Freshmen	# Compl	% Compl of Rem Req	# Req Rem	% of Total New Freshmen	# Compl	% Compl of Rem Req	# Req Rem	% of Total New Freshmen
UW-Madison	12	0.2%	8	66.7%	5	0.1%	3	60.0%	13	0.2%	7	53.8%	15	0.2%
UW-Milwaukee	1,350	39.1%	1,162	86.1%	994	30.0%	758	76.3%	938	30.1%	758	80.8%	882	27.3%
UW-Eau Claire	233	11.1%	200	85.8%	301	13.4%	282	93.7%	360	15.5%	321	89.2%	678	28.8%
UW-Green Bay	116	15.1%	96	82.8%	106	13.4%	100	94.3%	158	18.1%	133	84.2%	205	21.0%
UW-La Crosse	34	1.7%	26	76.5%	55	2.7%	43	78.2%	54	2.6%	41	75.9%	39	1.8%
UW-Oshkosh	810	47.4%	560	69.1%	689	43.8%	428	62.1%	649	43.2%	424	65.3%	637	41.9%
UW-Parkside	266	42.2%	172	64.7%	275	44.4%	162	58.9%	269	40.4%	166	61.7%	336	47.2%
UW-Platteville	626	36.7%	421	67.3%	558	34.4%	383	68.6%	577	37.0%	283	49.0%	395	27.7%
UW-River Falls	51	5.0%	35	68.6%	48	4.5%	34	70.8%	52	4.3%	27	51.9%	110	8.3%
UW-Stevens Point	170	10.4%	112	65.9%	206	11.5%	147	71.4%	125	7.9%	97	77.6%	185	11.9%
UW-Stout	49	3.3%	42	85.7%	40	2.5%	21	52.5%	43	2.7%	28	65.1%	255	16.7%
UW-Superior	115	34.8%	76	66.1%	141	38.5%	106	75.2%	124	33.0%	94	75.8%	127	36.8%
UW-Whitewater	499	23.2%	465	93.2%	442	20.2%	370	83.7%	526	23.7%	439	83.5%	519	25.8%
UW Colleges	1,147	29.5%	561	48.9%	1,266	33.5%	495	39.1%	1,097	34.3%	529	48.2%	1,121	34.2%
Total	**5,478**	**18.8%**	**3,936**	**71.9%**	**5,126**	**17.5%**	**3,332**	**65.0%**	**4,985**	**17.3%**	**3,347**	**67.1%**	**5,504**	**19.0%**

Note: In fall 2017, UW System implemented common cut score placement for placing students out of remedial math. Prior to 2017, UW institutions use incoming students' scores on the UW System Math Placement Test, ACT/SAT Math subscores, or a combination of these scores to determine if mathematics remediation is needed.

Appendix C

English Remediation Required and Completed in the First Year by UW Institution Fall 2014 to Fall 2017

Institution	Fall 2014				Fall 2015				Fall 2016				Fall 2017	
	# Req Rem	% of Total New Freshmen	# Compl	% Compl of Rem Req	# Req Rem	% of Total New Freshmen	# Compl	% Compl of Rem Req	# Req Rem	% of Total New Freshmen	# Compl	% Compl of Rem Req	# Req Rem	% of Total New Freshmen
UW-Madison	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
UW-Milwaukee	843	24.4%	749	88.8%	141	4.3%	115	81.6%	144	4.6%	126	87.5%	117	3.6%
UW-Eau Claire	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
UW-Green Bay	59	7.7%	49	83.1%	59	7.5%	55	93.2%	83	9.5%	66	79.5%	124	12.7%
UW-La Crosse	24	1.2%	7	29.2%	29	1.4%	15	51.7%	27	1.3%	17	63.0%	34	1.6%
UW-Oshkosh	103	6.0%	78	75.7%	102	6.5%	80	78.4%	86	5.7%	70	81.4%	86	5.7%
UW-Parkside	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
UW-Platteville	133	7.8%	97	72.9%	153	9.4%	67	43.8%	85	5.4%	52	61.2%	N/A	N/A
UW-River Falls	46	4.5%	35	76.1%	31	2.9%	27	87.1%	143	11.7%	63	44.1%	189	14.3%
UW-Stevens Point	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
UW-Stout	169	11.5%	143	84.6%	225	14.3%	146	64.9%	231	14.5%	152	65.8%	254	16.6%
UW-Superior	55	16.7%	39	70.9%	103	28.1%	69	67.0%	93	24.7%	78	83.9%	86	24.9%
UW-Whitewater	135	6.3%	122	90.4%	126	5.8%	118	93.7%	139	6.3%	130	93.5%	147	7.3%
UW Colleges	871	22.4%	466	53.5%	823	21.8%	385	46.8%	691	21.6%	317	45.9%	794	24.2%
Total	**2,438**	**8.4%**	**1,785**	**73.2%**	**1,792**	**6.1%**	**1,077**	**60.1%**	**1,722**	**6.0%**	**1,071**	**62.2%**	**1,831**	**6.3%**

Note: In the most recent year, UW-Madison, UW-Eau Claire, UW-Parkside, UW-Platteville, and UW-Stevens Point do not identify students needing English remediation and do not offer courses that are specifically intended for remedial English.

UW institutions use incoming students' scores on the UW System English Placement Test, ACT/SAT English subscores, or a combination of these scores to determine if English remediation is needed. Cutoff scores for English remediation differ across the UW institutions and may change over years.

Appendix D

Math Remediation Required and Completed in the First Year by Student Characteristic

Fall 2014 to Fall 2017

Category	Characteristic	Fall 2014					Fall 2015				
		All New Fresh	# Req Rem	% Req Rem	# Compl	% Compl	All New Fresh	# Req Rem	% Req Rem	# Compl	% Compl
Gender	Male	13,692	2,213	16.2%	1,505	68.0%	13,730	2,100	15.3%	1,304	62.1%
	Female	15,411	3,265	21.2%	2,431	74.5%	15,530	3,026	19.5%	2,028	67.0%
H.S. Rank**	Bottom Quartile	993	465	46.8%	256	55.1%	960	488	50.8%	218	44.7%
	3rd Quartile	3,731	1,367	36.6%	971	71.0%	3,675	1,273	34.6%	768	60.3%
	2nd Quartile	6,569	1,536	23.4%	1,178	76.7%	6,273	1,397	22.3%	1,011	72.4%
	Top Quartile	8,475	625	7.4%	493	78.9%	7,979	545	6.8%	400	73.4%
Race/ Ethnicity	African American	979	508	51.9%	324	63.8%	944	427	45.2%	215	50.4%
	Hispanic/Latino(a)	1,663	536	32.2%	373	69.6%	1,756	513	29.2%	333	64.9%
	American Indian	90	29	32.2%	17	58.6%	89	35	39.3%	16	45.7%
	Southeast Asian	626	145	23.2%	114	78.6%	583	101	17.3%	77	76.2%
	Two or More Races - URM	584	175	30.0%	119	68.0%	642	188	29.3%	111	59.0%
	URM Subtotal	3,942	1,393	35.3%	947	68.0%	4,014	1,264	31.5%	752	59.5%
	Hawaiian/Pacific Is.	21	*	*	*	*	21	6	28.6%	*	*
	Other Asian	549	64	11.7%	54	84.4%	540	60	11.1%	42	70.0%
	Two or More Races - Non-URM	334	45	13.5%	35	77.8%	506	57	11.3%	46	80.7%
	White	23,473	3,914	16.7%	2,856	73.0%	23,312	3,663	15.7%	2,441	66.6%
	Unknown	47	*	*	*	*	51	7	13.7%	*	*
	Non-URM Subtotal	24,424	4,027	16.5%	2,947	73.2%	24,430	3,793	15.5%	2,534	66.8%
	International	737	58	7.9%	42	72.4%	816	69	8.5%	46	66.7%
Age**	19 and Under	27,895	4,977	17.8%	3,652	73.4%	28,224	4,686	16.6%	3,093	66.0%
	20 to 24	884	342	38.7%	200	58.5%	801	311	38.8%	170	54.7%
	25 to 34	245	132	53.9%	68	51.5%	175	101	57.7%	58	57.4%
	35 and Over	79	27	34.2%	16	59.3%	60	28	46.7%	11	39.3%
Pell Grant	Recipient	7,923	2,240	28.3%	1,559	69.6%	7,508	1,963	26.1%	1,250	63.7%
	Not a Recipient	21,180	3,238	15.3%	2,377	73.4%	21,752	3,163	14.5%	2,082	65.8%
Total	All Char.	29,103	5,478	18.8%	3,936	71.9%	29,260	5,126	17.5%	3,332	65.0%

* To protect student privacy, data are not shown when there are five or fewer students placed into remediation.
** Subtotals do not necessarily sum to total due to missing data.
Note: Two or More Races-URM includes students identifying as two or more races, one of which is an underrepresented minority group. Two or More Races-Non-URM includes students identifying as two or more races, none of which is an underrepresented minority group.

Appendix D (Continued)

Math Remediation Required and Completed in the First Year by Student Characteristic

Fall 2014 to Fall 2017

Category	Characteristic	Fall 2016					Fall 2017		
		All New Fresh	# Req Rem	% Req Rem	# Compl	% Compl	All New Fresh	# Req Rem	% Req Rem
Gender	Male	13,368	2,053	15.4%	1,322	64.4%	13,331	2,138	16.0%
	Female	15,380	2,932	19.1%	2,025	69.1%	15,664	3,366	21.5%
H.S. Rank**	Bottom Quartile	830	387	46.6%	171	44.2%	800	364	45.5%
	3rd Quartile	3,316	1,177	35.5%	757	64.3%	3,175	1,218	38.4%
	2nd Quartile	6,003	1,306	21.8%	934	71.5%	5,703	1,450	25.4%
	Top Quartile	7,804	512	6.6%	385	75.2%	7,388	583	7.9%
Race/ Ethnicity	African American	857	370	43.2%	230	62.2%	863	384	44.5%
	Hispanic/Latino(a)	1,821	515	28.3%	351	68.2%	1,973	593	30.1%
	American Indian	69	18	26.1%	7	38.9%	88	26	29.5%
	Southeast Asian	499	98	19.6%	65	66.3%	557	122	21.9%
	Two or More Races - URM	692	184	26.6%	112	60.9%	653	185	28.3%
	URM Subtotal	3,938	1,185	30.1%	765	64.6%	4,134	1,310	31.7%
	Hawaiian/Pacific Is.	21	7	33.3%	*	*	22	*	*
	Other Asian	577	52	9.0%	37	71.2%	622	65	10.5%
	Two or More Races - Non-URM	324	30	9.3%	22	73.3%	308	50	16.2%
	White	22,989	3,655	15.9%	2,477	67.8%	22,900	4,028	17.6%
	Unknown	31	*	*	*	*	203	10	4.9%
	Non-URM Subtotal	23,942	3,748	15.7%	2,540	67.8%	24,055	4,157	17.3%
	International	868	52	6.0%	42	80.8%	806	37	4.6%
Age**	19 and Under	27,923	4,670	16.7%	3,163	67.7%	28,192	5,242	18.6%
	20 to 24	643	236	36.7%	144	61.0%	614	199	32.4%
	25 to 34	126	61	48.4%	32	52.5%	136	53	39.0%
	35 and Over	55	17	30.9%	7	41.2%	53	10	18.9%
Pell Grant	Recipient	7,129	1,849	25.9%	1,213	65.6%	N/A	N/A	N/A
	Not a Recipient	21,619	3,136	14.5%	2,134	68.0%	N/A	N/A	N/A
Total	All Char.	28,748	4,985	17.3%	3,347	67.1%	28,995	5,504	19.0%

* To protect student privacy, data are not shown when there are five or fewer students placed into remediation.
** Subtotals do not necessarily sum to total due to missing data.
Note: Two or More Races-URM includes students identifying as two or more races, one of which is an underrepresented minority group. Two or More Races-Non-URM includes students identifying as two or more races, none of which is an underrepresented minority group.

Appendix E

English Remediation Required and Completed in the First Year by Student Characteristic

Fall 2014 to Fall 2017

Category	Characteristic	Fall 2014					Fall 2015				
		All New Fresh	# Req Rem	% Req Rem	# Compl	% Compl	All New Fresh	# Req Rem	% Req Rem	# Compl	% Compl
Gender	Male	13,692	1,207	8.8%	841	69.7%	13,730	906	6.6%	518	57.2%
	Female	15,411	1,231	8.0%	944	76.7%	15,530	886	5.7%	559	63.1%
H.S. Rank**	Bottom Quartile	993	277	27.9%	156	56.3%	960	212	22.1%	104	49.1%
	3rd Quartile	3,731	709	19.0%	540	76.2%	3,675	516	14.0%	310	60.1%
	2nd Quartile	6,569	583	8.9%	460	78.9%	6,273	416	6.6%	269	64.7%
	Top Quartile	8,475	234	2.8%	190	81.2%	7,979	149	1.9%	92	61.7%
Race/ Ethnicity	African American	979	326	33.3%	225	69.0%	944	170	18.0%	83	48.8%
	Hispanic/Latino(a)	1,663	274	16.5%	201	73.4%	1,756	171	9.7%	101	59.1%
	American Indian	90	13	14.4%	11	84.6%	89	15	16.9%	8	53.3%
	Southeast Asian	626	177	28.3%	136	76.8%	583	106	18.2%	67	63.2%
	Two or More Races - URM	584	82	14.0%	61	74.4%	642	38	5.9%	24	63.2%
	URM Subtotal	3,942	872	22.1%	634	72.7%	4,014	500	12.5%	283	56.6%
	Hawaiian/Pacific Is.	21	*	*	*	*	21	*	*	*	*
	Other Asian	549	37	6.7%	31	83.8%	540	34	6.3%	20	58.8%
	Two or More Races - Non-URM	334	15	4.5%	10	66.7%	506	15	3.0%	14	93.3%
	White	23,473	1,466	6.2%	1,088	74.2%	23,312	1,197	5.1%	738	61.7%
	Unknown	47	*	*	*	*	51	*	*	*	*
	Non-URM Subtotal	24,424	1,525	6.2%	1,135	74.4%	24,430	1,254	5.1%	779	62.1%
	International	737	41	5.6%	16	39.0%	816	38	4.7%	15	39.5%
Age**	19 and Under	27,895	2,252	8.1%	1,690	75.0%	28,224	1,650	5.8%	1,011	61.3%
	20 to 24	884	132	14.9%	71	53.8%	801	112	14.0%	52	46.4%
	25 to 34	245	48	19.6%	21	43.8%	175	25	14.3%	12	48.0%
	35 and Over	79	6	7.6%	*	*	60	*	*	*	*
Pell Grant	Recipient	7,923	1,185	15.0%	864	72.9%	7,508	716	9.5%	436	60.9%
	Not a Recipient	21,180	1,253	5.9%	921	73.5%	21,752	1,076	4.9%	641	59.6%
Total	All Char.	29,103	2,438	8.4%	1,785	73.2%	29,260	1,792	6.1%	1,077	60.1%

* To protect student privacy, data are not shown when there are five or fewer students placed into remediation or completing remediation.

** Subtotals do not necessarily sum to total due to missing data.

Note: Two or More Races-URM includes students identifying as two or more races, one of which is an underrepresented minority group. Two or More Races-Non-URM includes students identifying as two or more races, none of which is an underrepresented minority group.

Appendix E (Continued)

English Remediation Required and Completed in the First Year by Student Characteristic

Fall 2014 to Fall 2017

Category	Characteristic	Fall 2016					Fall 2017		
		All New Fresh	# Req Rem	% Req Rem	# Compl	% Compl	All New Fresh	# Req Rem	% Req Rem
Gender	Male	13,368	856	6.4%	521	60.9%	13,331	869	6.5%
	Female	15,380	866	5.6%	550	63.5%	15,664	962	6.1%
H.S. Rank**	Bottom Quartile	830	195	23.5%	94	48.2%	800	216	27.0%
	3rd Quartile	3,316	499	15.0%	311	62.3%	3,175	453	14.3%
	2nd Quartile	6,003	358	6.0%	239	66.8%	5,703	349	6.1%
	Top Quartile	7,804	104	1.3%	71	68.3%	7,388	86	1.2%
Race/ Ethnicity	African American	857	158	18.4%	102	64.6%	863	182	21.1%
	Hispanic/Latino(a)	1,821	185	10.2%	113	61.1%	1,973	203	10.3%
	American Indian	69	7	10.1%	5	71.4%	88	16	18.2%
	Southeast Asian	499	96	19.2%	64	66.7%	557	93	16.7%
	Two or More Races - URM	692	47	6.8%	31	66.0%	653	73	11.2%
	URM Subtotal	3,938	493	12.5%	315	63.9%	4,134	567	13.7%
	Hawaiian/Pacific Is.	21	*	*	*	*	22	*	*
	Other Asian	577	22	3.8%	13	59.1%	622	31	5.0%
	Two or More Races - Non-URM	324	10	3.1%	7	70.0%	308	10	3.2%
	White	22,989	1,154	5.0%	710	61.5%	22,900	1,186	5.2%
	Unknown	31	*	*	*	*	203	10	4.9%
	Non-URM Subtotal	23,942	1,193	5.0%	733	61.4%	24,055	1,239	5.2%
	International	868	36	4.1%	23	63.9%	806	25	3.1%
Age**	19 and Under	27,923	1,640	5.9%	1,030	62.8%	28,192	1,727	6.1%
	20 to 24	643	70	10.9%	33	47.1%	614	81	13.2%
	25 to 34	126	9	7.1%	6	66.7%	136	17	12.5%
	35 and Over	55	*	*	*	*	53	6	11.3%
Pell Grant	Recipient	7,129	701	9.8%	452	64.5%	N/A	N/A	N/A
	Not a Recipient	21,619	1,021	4.7%	619	60.6%	N/A	N/A	N/A
Total	All Char.	28,748	1,722	6.0%	1,071	62.2%	28,995	1,831	6.3%

* To protect student privacy, data are not shown when there are five or fewer students placed into remediation or completing remediation.
** Subtotals do not necessarily sum to total due to missing data.
Note: Two or More Races-URM includes students identifying as two or more races, one of which is an underrepresented minority group. Two or More Races-Non-URM includes students identifying as two or more races, none of which is an underrepresented minority group.