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**Testimony for the
Finance Revenue & Bonding Committee
Jennifer Widness, President
Connecticut Conference of Independent Colleges
April 10, 2019**

On behalf of the Connecticut Conference of Independent Colleges (CCIC) I am submitting testimony on **HB 7410: An Act Concerning Certain Tax Recommendations of the Commission on Fiscal Stability and Economic Growth and Establishing a STEM Scholarship Program**. We support sections 33 and 34 of this bill which propose to create a \$200 million scholarship fund for Connecticut students that enroll in a degree program in science, technology, engineering, math and health professions (including in teacher prep programs in these areas).

By way of background, Connecticut's 15 private, non-profit colleges that comprise the membership of CCIC enroll over 80,000 students in Connecticut annually. They award nearly 50% of the bachelor's degree earned in the state each year and over 60% of the graduate degrees earned. Of the bachelor's degrees and above awarded in key areas that are targets for economic growth – engineering, computer science, bioscience and the health professions – most are earned at the state's independent colleges (see figure 1).

Connecticut's workforce is one of the most educated in the nation. However, employers continue to complain about the inability to fill positions, especially in STEM fields. In fact, according to research done by McKinsey for the Commission on Fiscal Stability and Economic Growth in 2018, there is a significant mismatch between supply and demand in Engineering, Computer and Mathematics and the Healthcare practitioners (figure 2).

Due to state investments at UConn as well as new programs and increased enrollment at the independent colleges, Connecticut saw a dramatic increase in the number of degrees awarded in engineering and computer science over the past five years (figures 3 & 4). However, recent data analyzed by [P20 WIN](#) shows we continue to lag our neighboring states on a per capita basis in the production of bachelor's degrees in engineering, computer science and other STEM fields (see figures 5-6 and click [here](#) for the complete P20 WIN report).

We also lag our neighbors in retaining our graduates. Data compiled by McKinsey also for the Commission on Fiscal Stability notes that only 32% of the graduates from our higher education institutions stay in state after graduation, compared to 54% of graduate retention in New York and 46% in Massachusetts (see figure 7). Institutions – public and private -- that enroll more Connecticut residents, have a higher retention rate of their graduates. However, retention rates also vary by degree. **Only 40% of our engineering**

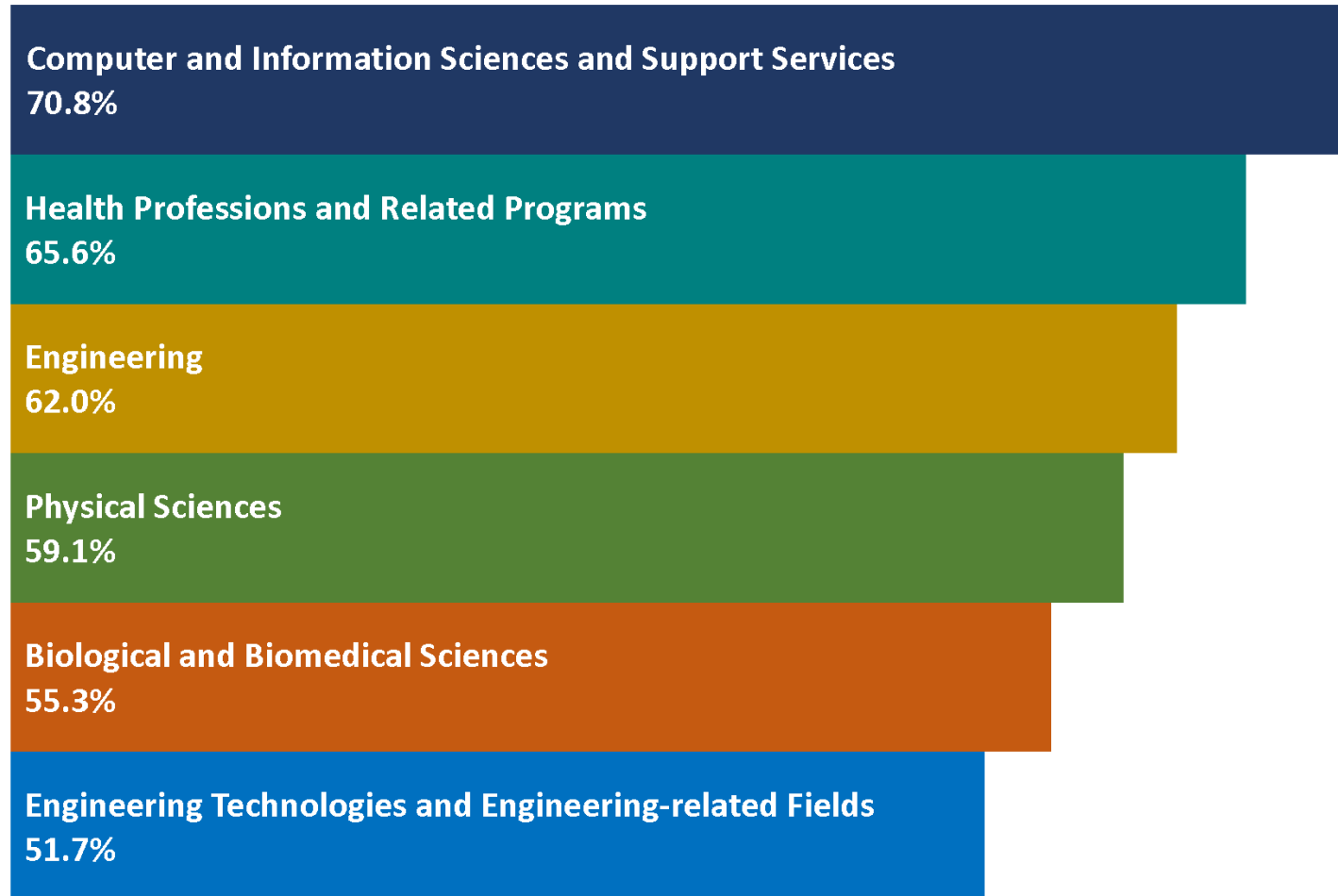
grads are found to be working in state two years after completion (see figure 8). We also lag in the retention of our high school graduates attending college in-state and do not import enough students to make up for that, compared to our neighbors (see figures 9 & 10).

Scholarships such as the Roberta Willis Scholarship Program have proven to be a very effective talent retention tool. **Recent data from P20 WIN shows that 84% of Scholarship recipients were found working in Connecticut two years after graduation.** This is significantly higher than the average for the sector at 38% (figure 11).

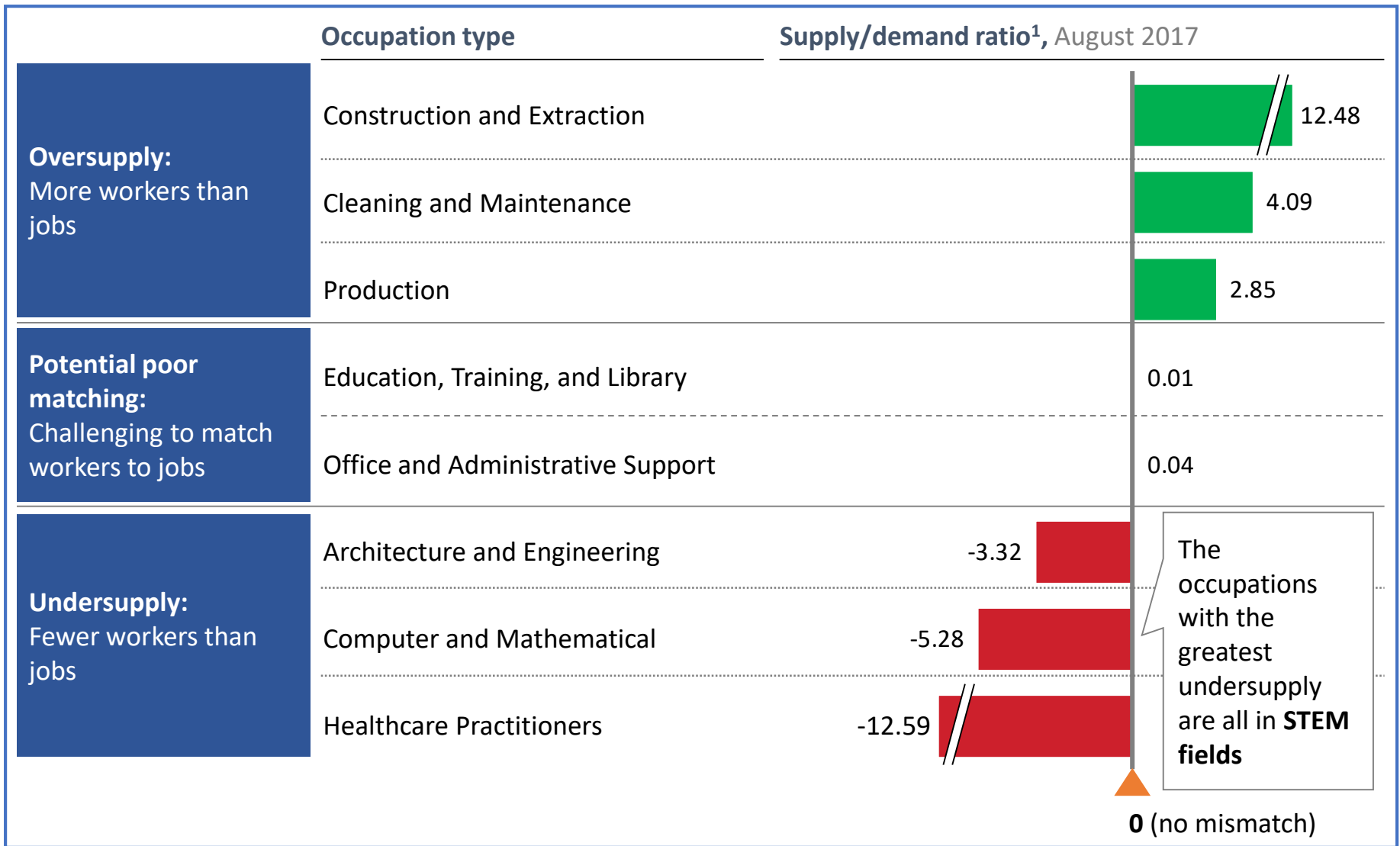
Job growth projections analyzed by P20 WIN shows we simply are not producing the degrees needed to meet demand in many STEM fields (see figure 12). Investments in scholarship funding to provide greater access to the state's STEM degree programs at public and private colleges for Connecticut students would create a more robust pipeline to assure that our state has the talent needed to remain competitive.

Percent of Statewide Industry Cluster Degrees Awarded by Connecticut Independent Colleges in 2017-18: Bachelor's Degrees and Above

Source: IPEDS Data Center



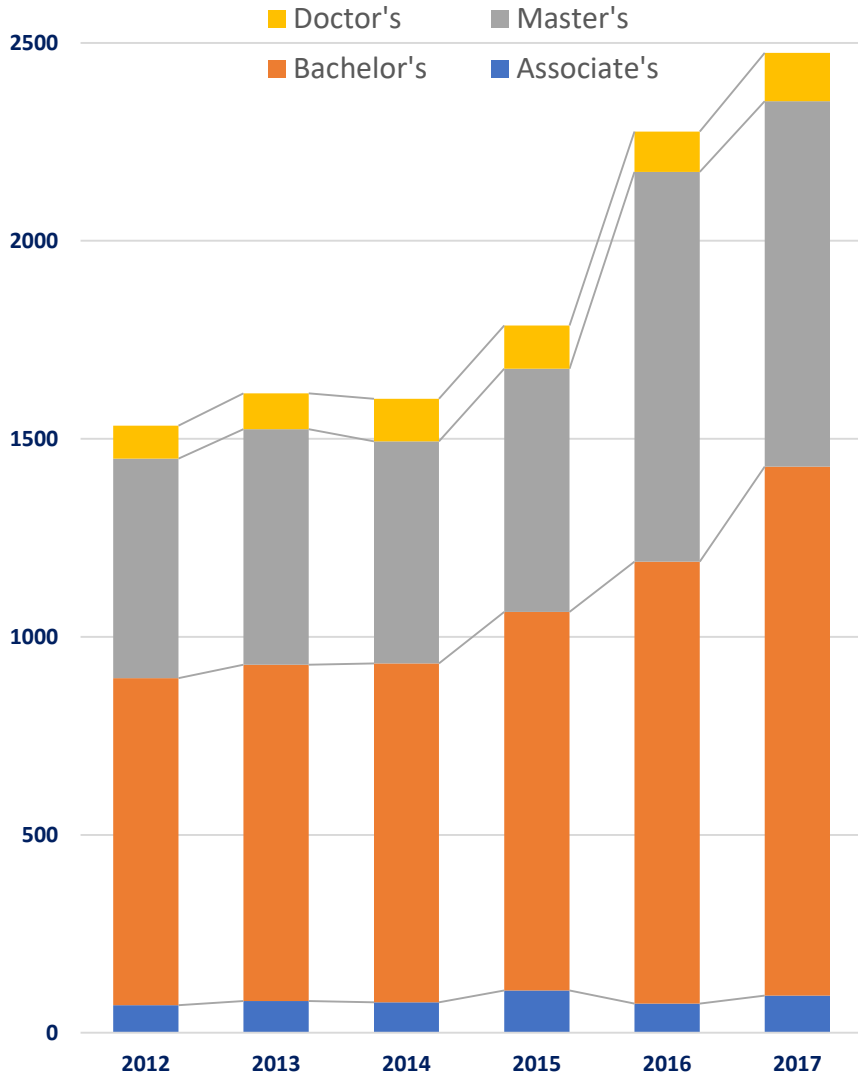
Connecticut Suffers from an Undersupply of STEM Degrees in the Labor Market



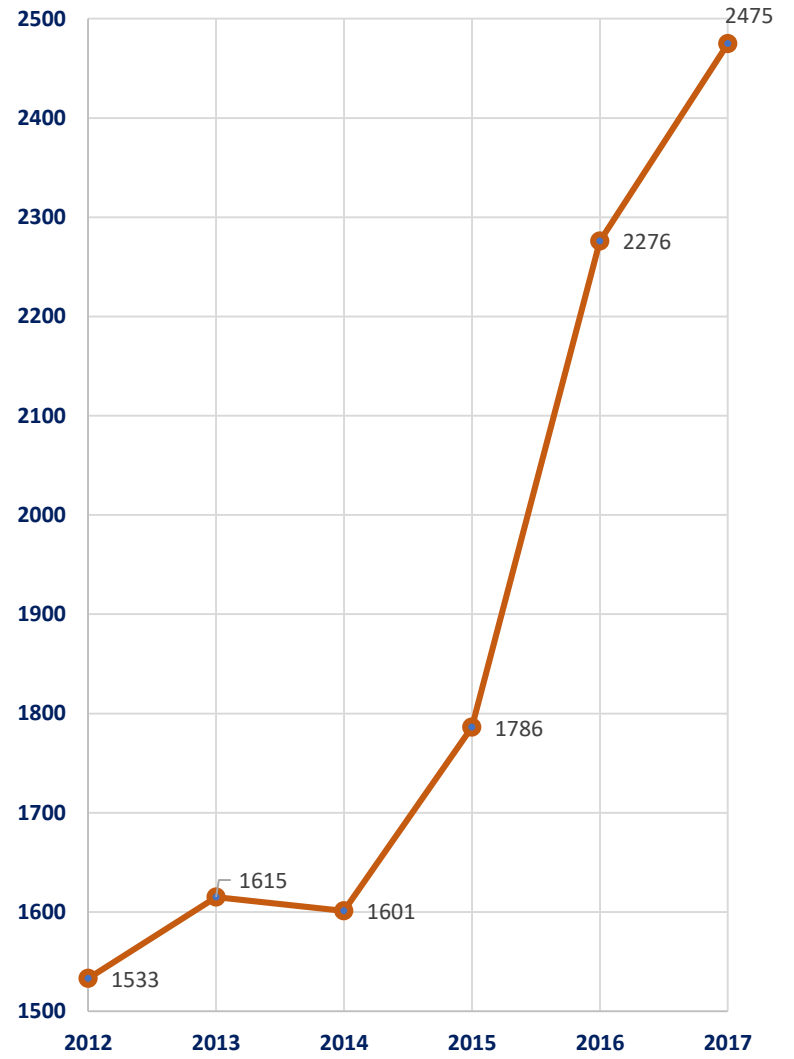
¹ Measured as the ratio of unemployed individuals in a given profession to open job postings in that profession

SOURCE: CT Commission on Fiscal Stability & Economic Growth via EMSI and BLS data

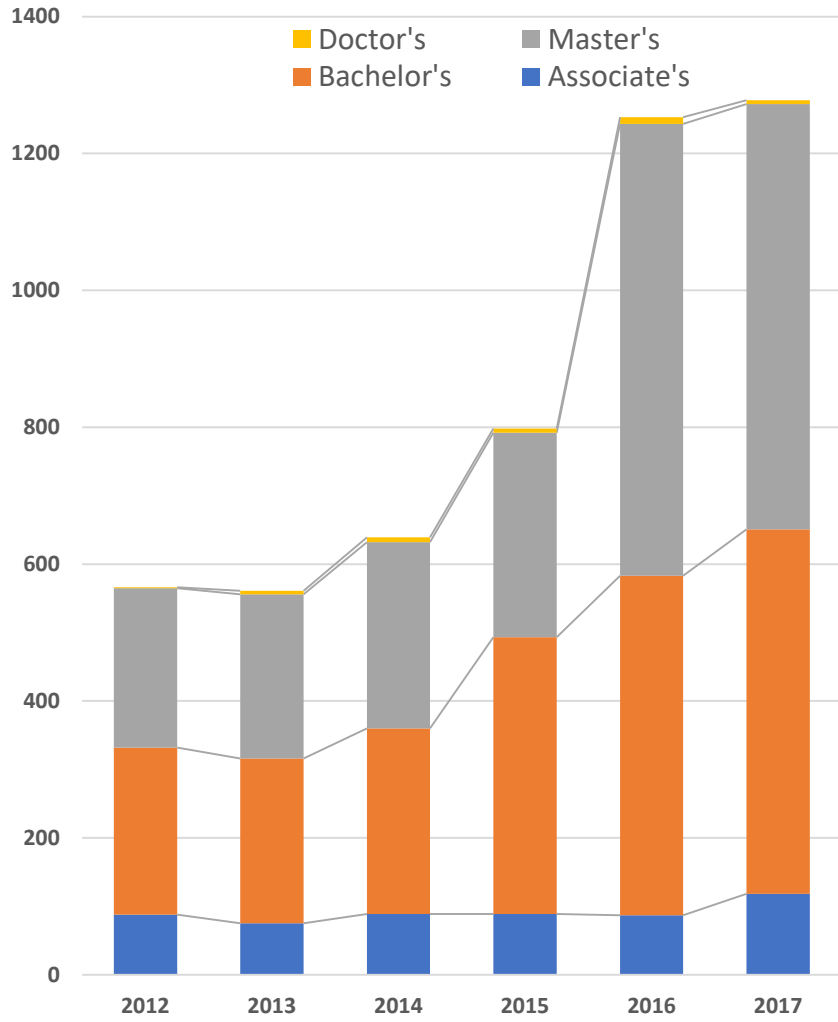
2012-17 Engineering Completions by Degree Type in Connecticut



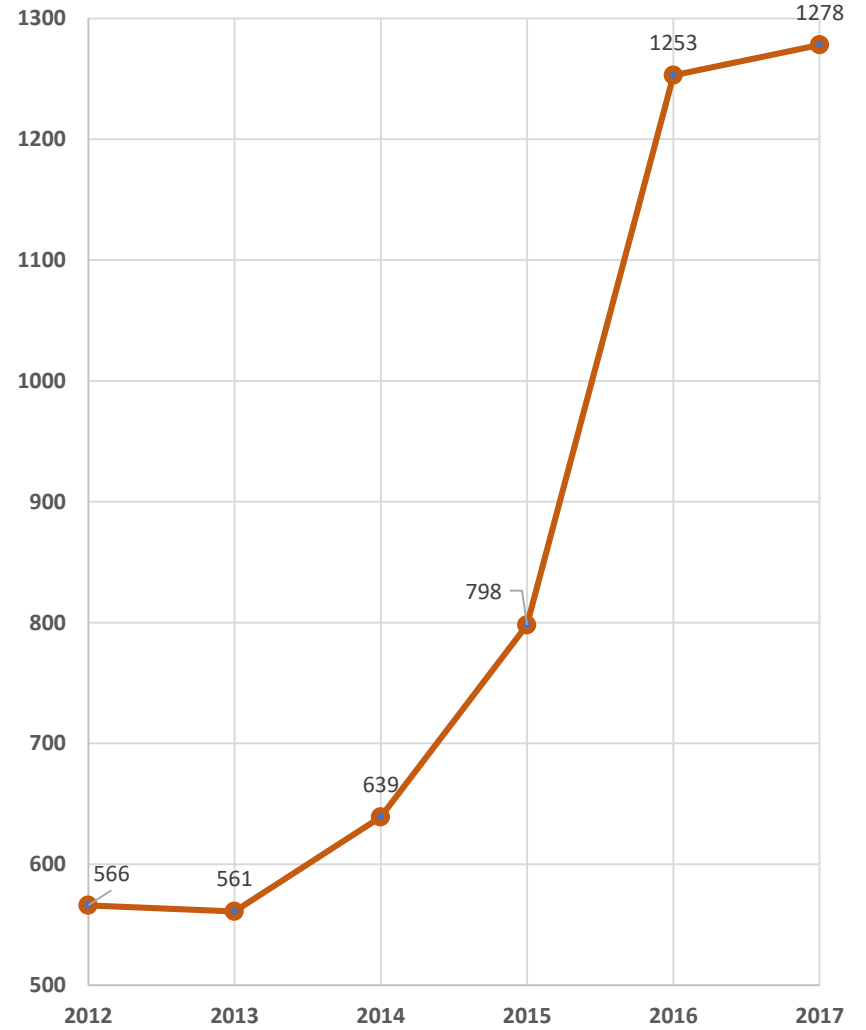
2012-17 Total Engineering Completions in Connecticut



2012-17 Computer Science Completions by Degree Type in Connecticut

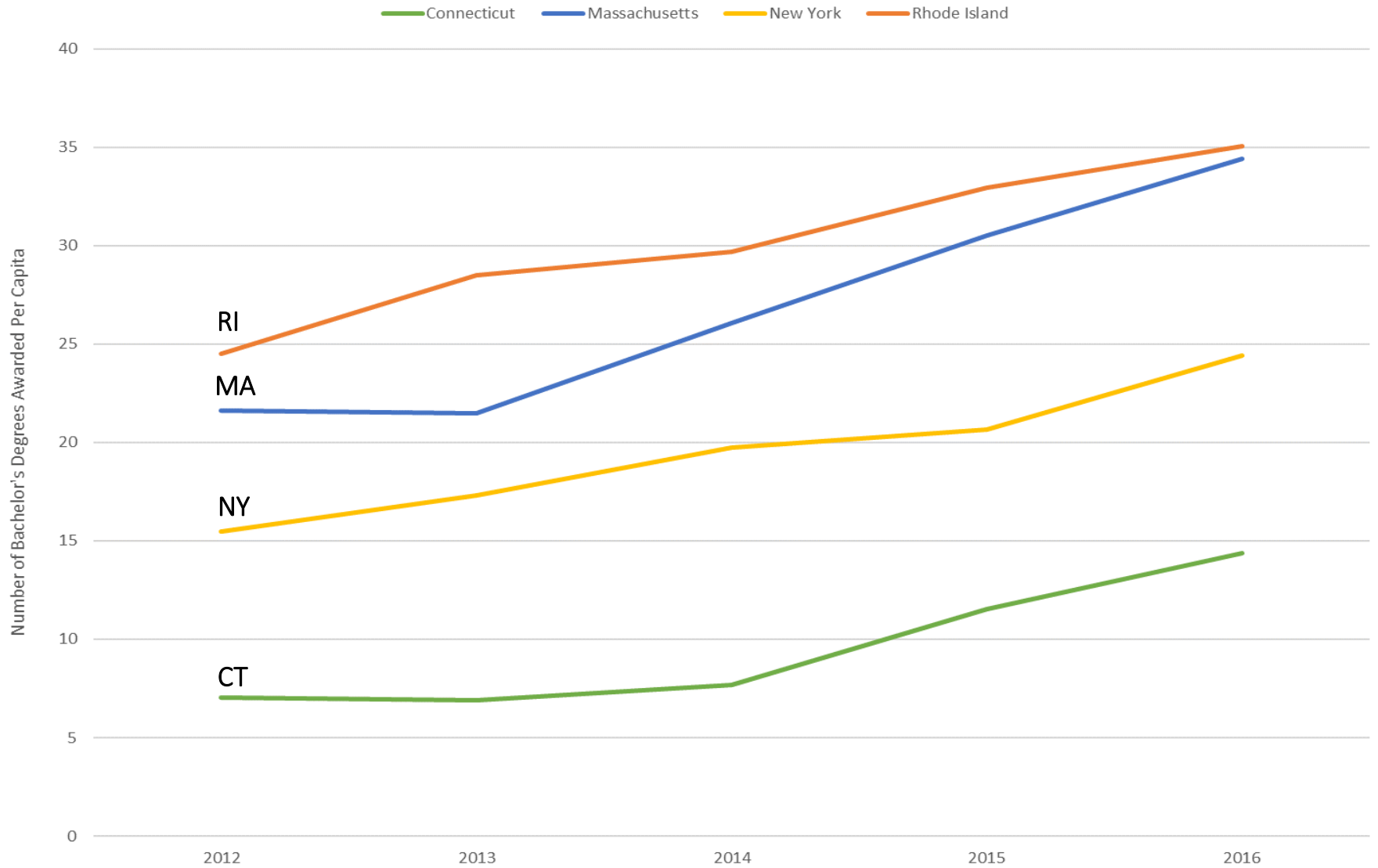


2012-17 Total Computer Science Completions in Connecticut



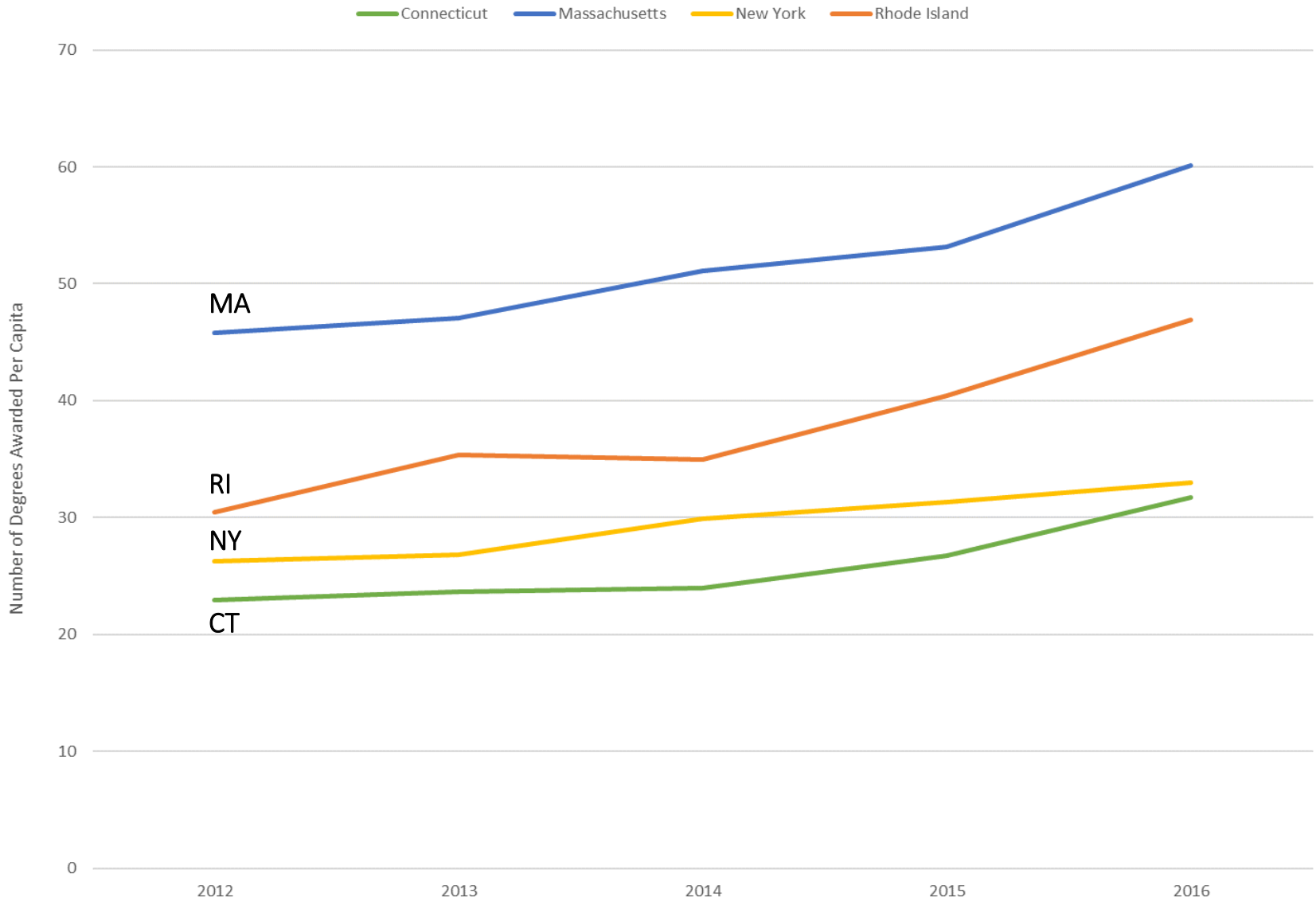
Trends of Computer Science Bachelor's Degrees Awarded Per Capita by State

Source: Comprehensive Study on Technology Talent in CT (P20 WIN)



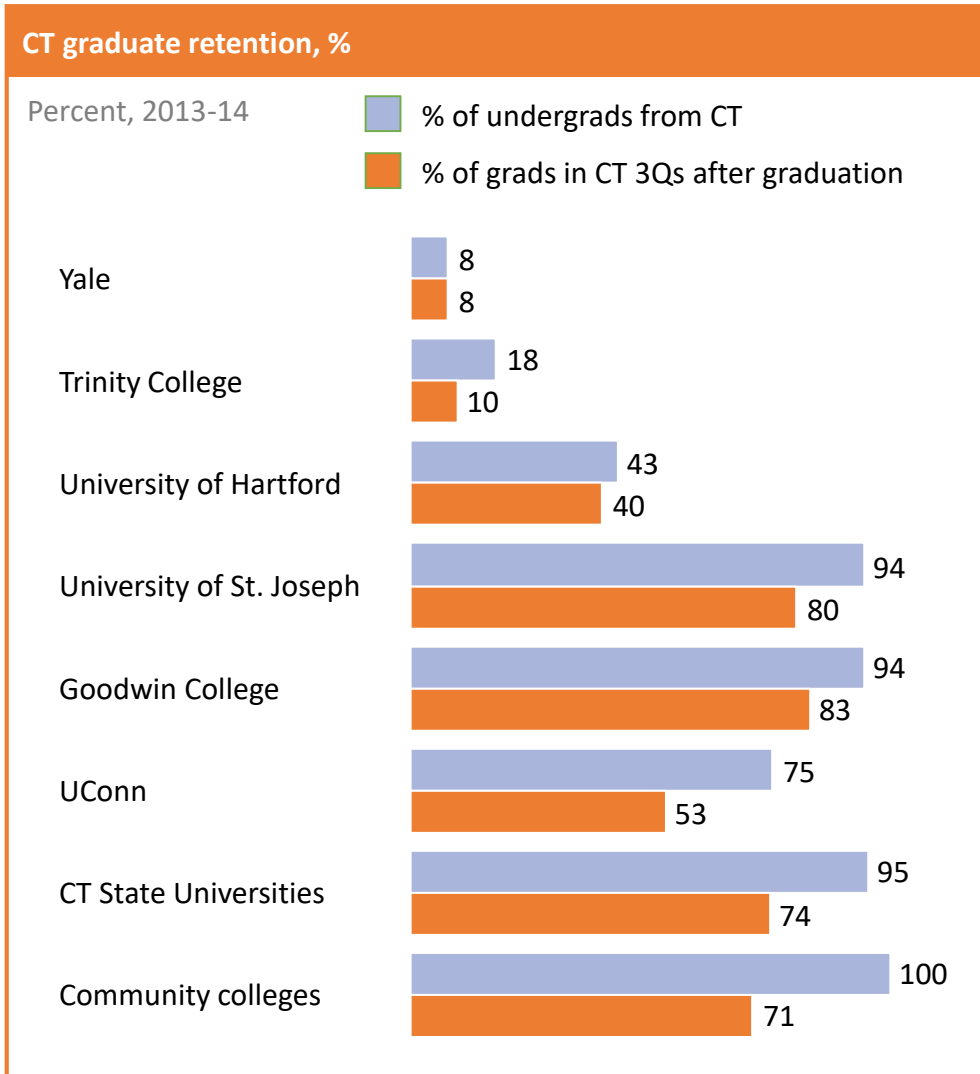
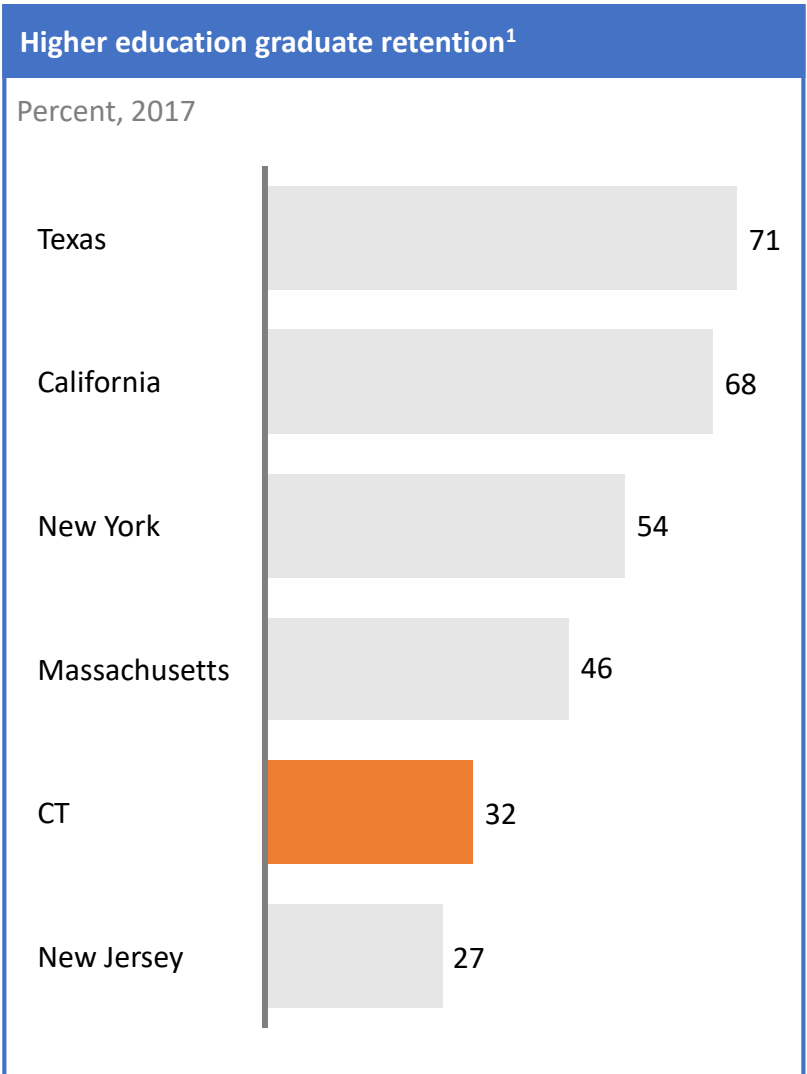
Trends of Engineering Bachelor's Degrees Awarded Per Capita by State

Source: Comprehensive Study on Technology Talent in CT (P20 WIN)



Retention of Higher Education Graduates

Figure 7

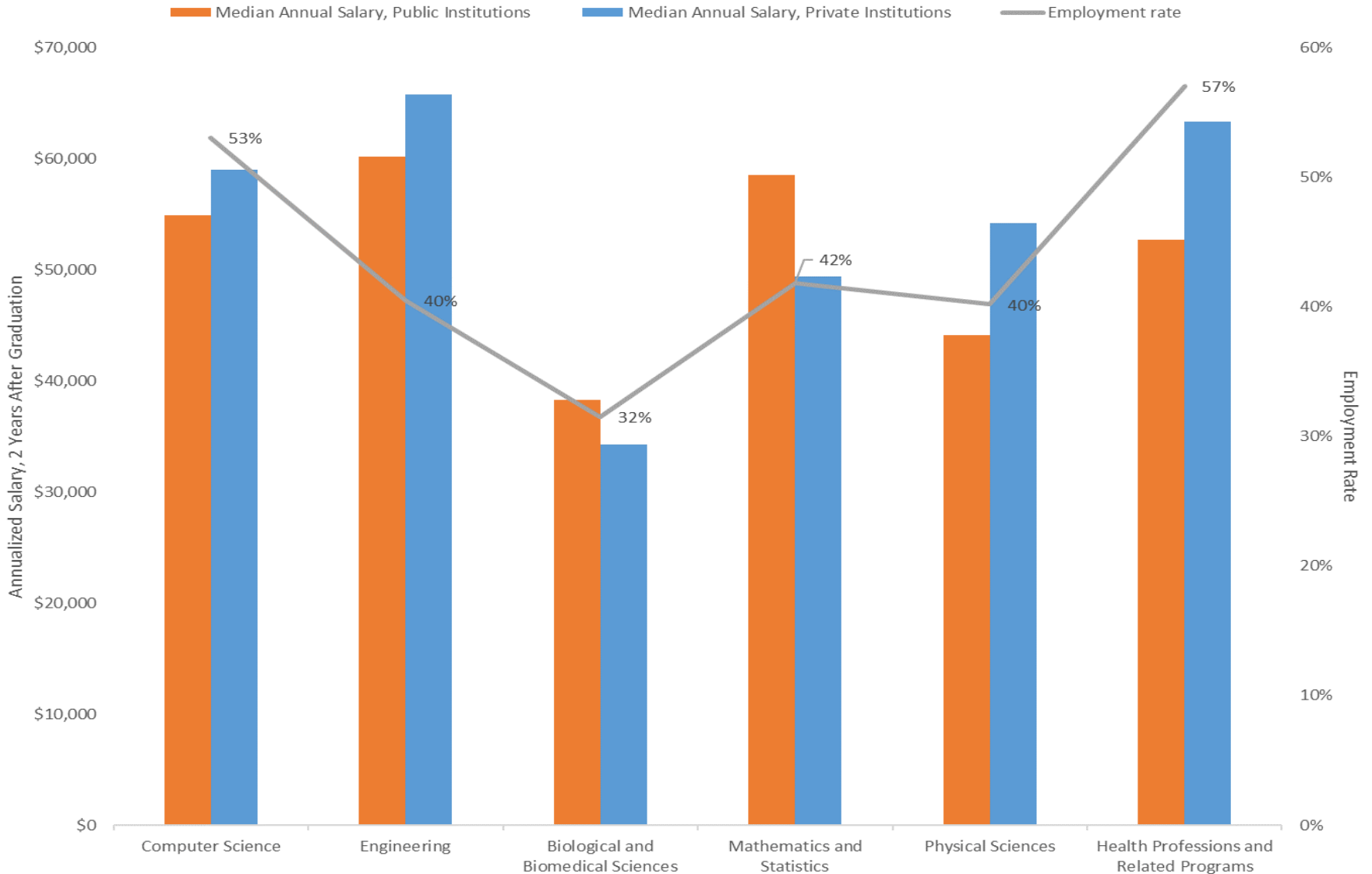


- CT ranks 38th out of the states in percentage of 20-24 year-olds
- The retention rate varies by school, and whether the student was a CT resident (went to high school in the state)

SOURCE: LinkedIn, Hartford Courant, U.S. Census data, cicu-IRPS, Office of Institutional Research

Employment Outcomes of CT Graduates Two Years After Graduation, By Sector and Technology Program Area

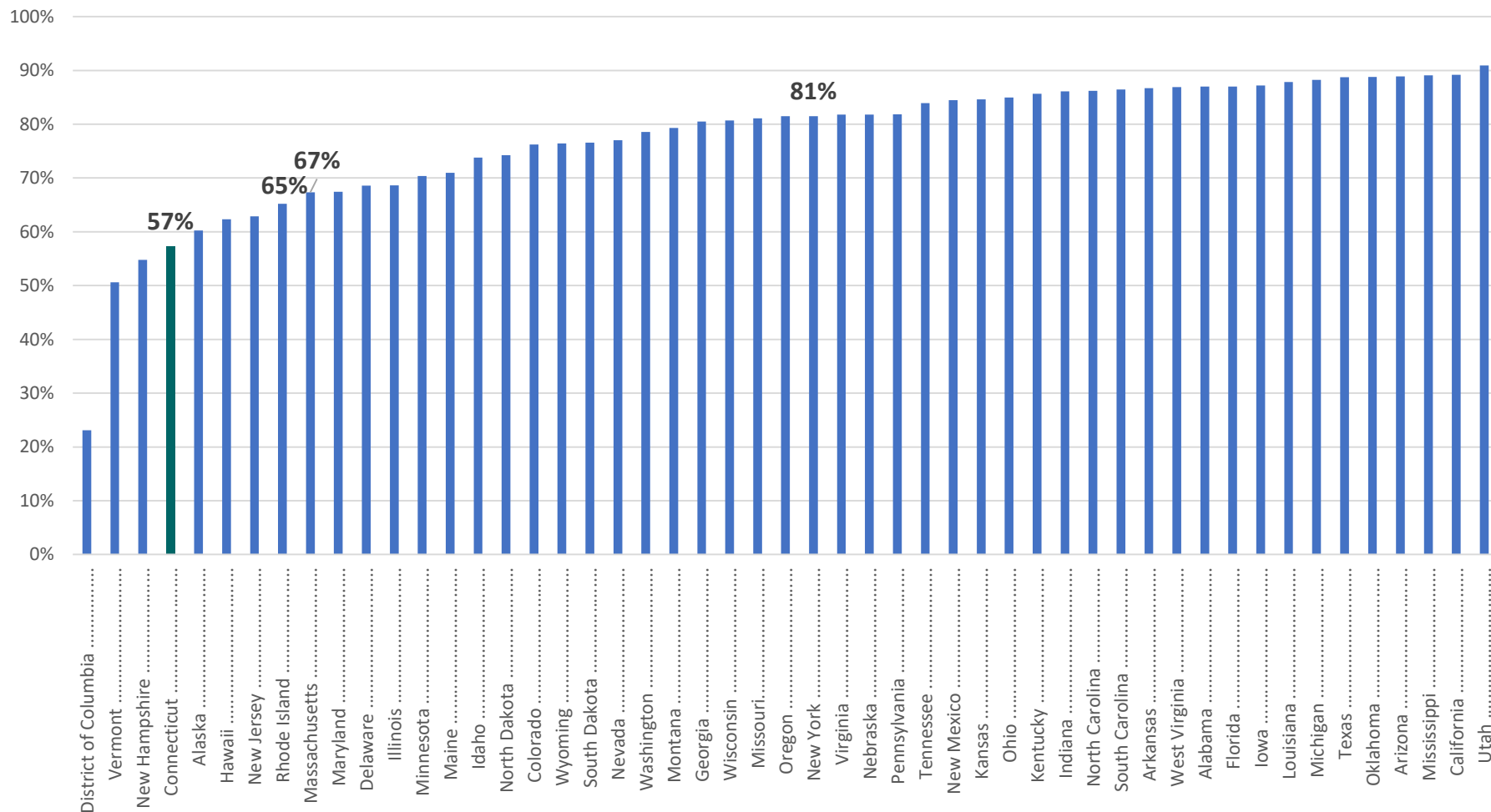
Source: Comprehensive Study on Technology Talent in CT (P20 WIN)



Percent of all first-time degree/certificate-seeking undergraduates that enrolled at in-state institutions: Fall 2016

Figure 9

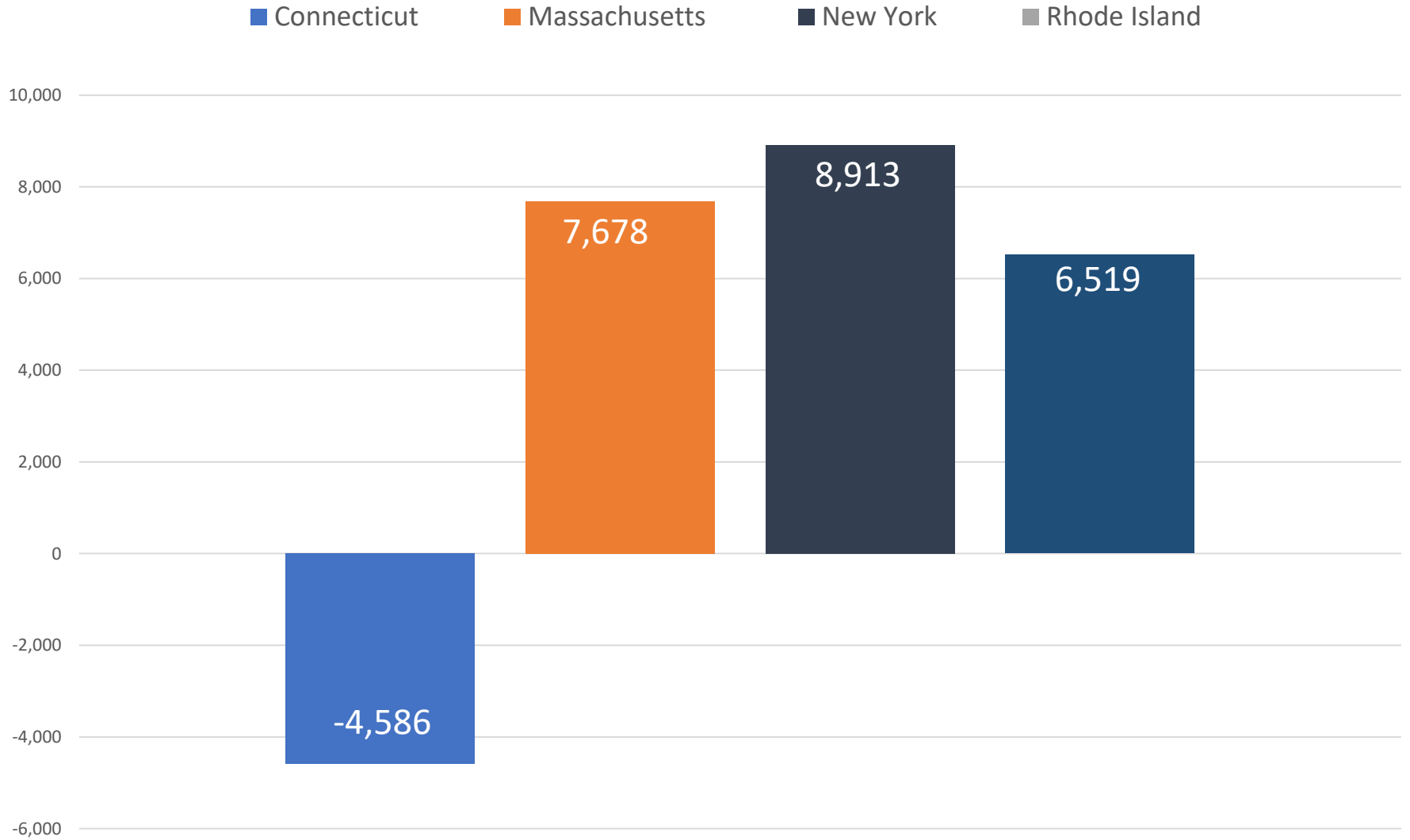
Source: NCES



Only 57% of recent high school graduates enroll in college in-state; this is the 4th lowest percent in the country, after only DC, VT & NH. 9

Net Migration of College-Going Students in the Northeast: Fall 2016

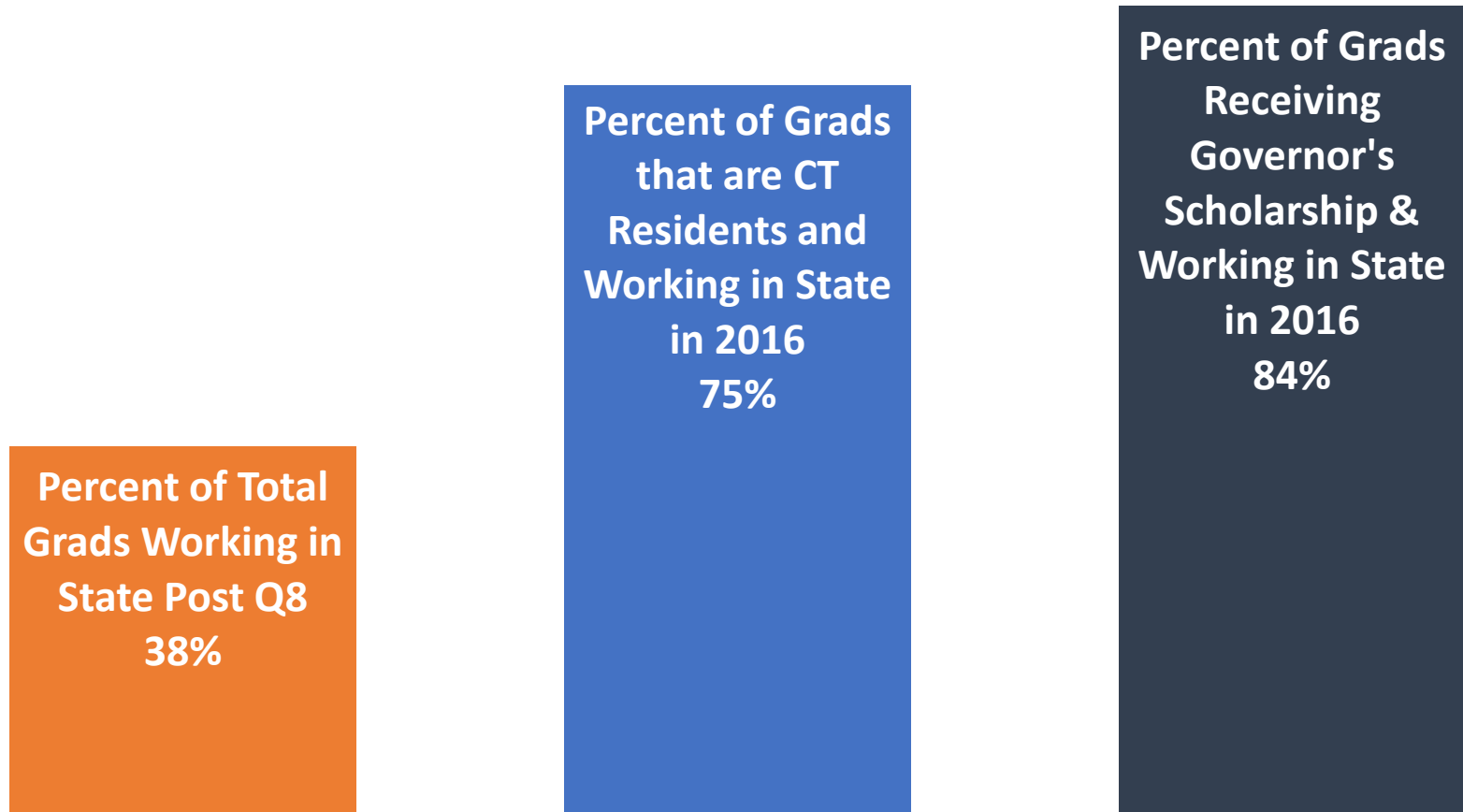
Source: National Center for Education Statistics



Connecticut is the only state in the region with a net-loss of college going students

Percent of 13-14 Graduates from CCIC Institutions* found Employed in CT 8 Quarters after Graduation

Source: P20 WIN



CT residents and state scholarship recipients at independent colleges are working in state upon completion at a higher rate than average

*Data set limited to: Albertus Magnus College, Goodwin College, Sacred Heart University, University of Hartford, University of New Haven, University of Saint Joseph, Yale and Wesleyan.

Reconciling projected CT technology talent with projected CT technology jobs

Source: Comprehensive Study on Technology Talent in CT (P20 WIN)

| | Replacement of Current Jobs in 2022 | New Jobs by 2022 | Percent of Jobs Requiring Associate's or Bachelor's Degree | Jobs Available for CT's College Graduates | Number of CT Graduates by 2018-2022 | Percent of Jobs Filled by CT Graduates |
|---------------------|-------------------------------------|------------------|--|---|-------------------------------------|--|
| Computer Science | 21,133 | 6,552 | 59% | 16,334 | 5,793 | 35% |
| Engineering | 23,574 | 4,345 | 49% | 13,681 | 9,878 | 72% |
| Biological sciences | 7,261 | 2,525 | 44% | 4,306 | 9,054 | 210% |
| Math and statistics | 3,046 | 1,200 | 39% | 1,656 | 2,349 | 142% |
| Physical sciences | 5,619 | 1,345 | 44% | 3,064 | 1,987 | 65% |
| Health programs | 80,931 | 43,336 | 26% | 32,309 | 24,864 | 77% |