

## Goal 1. Postsecondary Education, Career and Technical Education, and Adult Education:

**Increase college access, affordability, quality, and completion by improving postsecondary education and lifelong learning opportunities for youths and adults.**

**Goal Leader: Ted Mitchell, Under Secretary**

### Public Benefit

Increasing college access, affordability, quality, and completion by improving postsecondary education and lifelong learning opportunities for youths and adults requires attention to three equally important factors to facilitate success: availability of good consumer information and financial aid, strong motivation by students and families, and access to affordable, high-quality learning opportunities.

Prior to entering postsecondary education, prospective students need easily accessible information on the cost of attendance and financial aid; rates for career placement, graduation, and college loan defaults; labor market outcomes and projections of labor market demand; loan repayment and management options; and other subjects crucial to understanding the affordability and value of the postsecondary institutions and programs of study available. Students deserve to know that, whether they enter a college, university, career training program, or adult education program, the credential they earn will be affordable and its value will be recognized as an indication that they possess the necessary knowledge and skills for success in the workplace and in life.

Providing federal student aid in a simple, reliable, and efficient manner is primarily how the Department supports college access, affordability, quality, and completion. In FY 2015, the Department delivered nearly \$128 billion in grants, work-study, and loan assistance to almost 12 million postsecondary students at over 6,100 schools.<sup>1</sup> In addition, the Department administered \$2 billion annually in grants to strengthen postsecondary institutions and promote college readiness, and nearly \$1.7 billion more in grant funds for career and technical education (CTE), adult education (including literacy and civics education), and correctional education to help youths and adults secure the skills that equip them for work, civic participation, and lifelong learning.<sup>2</sup>

The Department has taken significant steps to increase college access, affordability, quality, and completion in recent years. Resources developed by the Department, such as the [College Affordability and Transparency Center](#), the [Financial Aid Shopping Sheet](#), the [College Scorecard](#), a consolidated [student aid website](#), and new loan counseling and financial literacy resources, now provide students and families with new and enhanced tools for informed decision-making. In particular, the release in FY 2015 of a vastly expanded College Scorecard—including many important metrics that have not been published before—has set a new standard for consumer information about postsecondary education. Redesigned with direct input from students, families, and their advisers, the College Scorecard provides the clearest, most accessible, and most reliable national data on cost, graduation, debt, and postcollege earnings. Gainful Employment regulations will also ensure that students are informed about key

<sup>1</sup> [Federal Student Aid Annual Report FY 2015](#).

<sup>2</sup> Note that CTE formula funds go to both secondary and postsecondary programs; approximately 40% of the amount listed goes to postsecondary programs.

outcomes for occupational-oriented programs before they enroll and that programs not meeting established standards will lose eligibility for access to federal student aid funds. In addition, the Department continues to simplify the FAFSA so it is easier and faster for students to apply for aid, and has improved the process. Beginning with the 2017–18 award year, students can apply earlier and electronically retrieve tax information filed for an earlier year, rather than waiting until tax season to complete their applications. Learning about aid eligibility options much earlier in the college application and decision process will allow students and families to determine the true cost of attending college—taking available financial aid into account—and make more informed decisions. New and expanded repayment plans, including Pay As You Earn (PAYE) and Revised Pay As You Earn (REPAYE), make debt more affordable for students after they leave school. America’s College Promise, the President’s proposed new federal-state partnership to make two years of community college free for responsible students, would significantly impact affordability by letting students earn the first half of a bachelor’s degree and earn skills needed in the workforce at no cost. This proposal will require everyone to do their part: community colleges must strengthen their programs and increase the number of students who graduate, states must invest more in higher education and training, and students must take responsibility for their education, earn good grades, and stay on track to graduate. The Department will build on these efforts to ensure that all Americans, regardless of their financial circumstances, will have the opportunity to access and complete an affordable postsecondary degree or other postsecondary credential.

## Analysis and Next Steps

### **Objective 1.4: Science, Technology, Engineering, and Mathematics (STEM) Pathways.**

Increase STEM pathway opportunities that enable access to and completion of postsecondary programs.

#### **Objective Leader:**

Russ Shilling, Director, Office of STEM, Office of Innovation and Improvement (OII)

#### **Explanation and Analysis of Progress:**

The Department, in consultation with OMB, has highlighted this objective as a focus area for improvement. The number of STEM postsecondary credentials awarded is shaped by actions taken by postsecondary institutions, by state and local agencies through funding decisions, and by market forces and jobs creation trends. Many external factors impact this objective but the Department can nonetheless assert considerable influence to improve quality and access in STEM education. The total number of STEM postsecondary credentials awarded reflects a mixed response to the President’s call to graduate an additional 1 million STEM majors by 2020. To reach that ambitious goal, the target of total credentials established for FY 2015 was 595,000; the actual number of granted credentials was 573,911. The First in the World program, which seeks to address persistent and widespread challenges in postsecondary education for high-need students, awarded more than half of the development grants for implementation and evaluation of projects to increase success in STEM fields or that utilize education technology to enhance learning and assessment.

OCTAE is leading initiatives seeking to increase knowledge of and access to postsecondary STEM opportunities. For example, the CTE makeover challenge will incorporate “making” and “maker spaces” into CTE programs by upgrading or modernizing facilities that meet the needs of manufacturing in the 21st century. The Reach Higher App challenge will spur innovation in career exploration by empowering students with individualized career and education information. During this reporting period, the White House Initiative on Historically Black Colleges and Universities held its annual conference focused on STEM and entrepreneurship.

Across the administration, the Committee on STEM Education (CoSTEM) has established a task force which is working to enhance the undergraduate experience of STEM majors through a formally chartered interagency working group led by the National Science Foundation (NSF). The group is focused on four major objectives:

- Evidence-based practices to improve undergraduate learning and retention in STEM;
- Community college efforts to both support two-year students and create bridges between two- and four-year postsecondary institutions;
- Research experiences that involve both university-industry and university-federal entity partnerships, particularly for students in the first two years; and
- Promoting mathematics success to help combat excessively high failure rates in introductory math courses at the undergraduate level.

Representatives from the Department have been instrumental in bringing new focus to the role of community colleges and articulation programs in supporting undergraduate STEM education. We anticipate that increasing the overall pipeline of candidates pursuing postsecondary education through community colleges and articulation programs will help address the decline in STEM certificates awarded.

Trends for females and minority students point to continued challenges in broadening participation in STEM. More STEM credentials were awarded in 2012–13 to students of each gender and racial/ethnic category—including Hispanic and Black—than in previous years, with the exception of American Indian and Alaska Native students. Along with the CoSTEM interagency working group focused on broadening participation in STEM, the My Brother's Keeper and Reach Higher initiatives, as well as other targeted efforts, may help expand participation of underrepresented groups in postsecondary STEM programs.

### **Challenges and Next Steps:**

The Office of STEM has been in place since June 2014. As a comparatively new entity one of its primary tasks has been to identify programs within the Department and across the federal government that are well suited for enhancing and increasing STEM participation through strategic use of STEM priorities. For programs that have already implemented STEM strategies, the office lends its expertise for program review and evaluation. The investments at the Department that address STEM degree and credential completion in particular are limited to select programs that target minority-serving institutions. As the next grant cycle commences, the Department is engaging in planning meetings that will identify areas for strategic leverage—technical assistance to grantees, preaward support to potential applicants, etc. The Department will continue to promote STEM pathway opportunities within the CoSTEM structure that include community colleges, as well as engage with specific STEM-focused initiatives led by corporate and philanthropic entities that help elevate the quality of STEM programs and advance STEM participation (e.g., STEM Learning Ecosystems).

**Subpopulation Breakout for Metric 1.4.A: STEM\* postsecondary credentials awarded by degree-granting institutions\*\*, by gender and race/ethnicity**

Year	Total	Gender		Race/Ethnicity								
		Male	Female	White	Black	Hispanic	Asian/Pacific Islander			American Indian/Alaska Native	Two or More Races	Non-resident Alien
							Total	Asian	Pacific Islander			
2010–11	531,018	370,922	160,096	319,327	47,014	45,794	51,461	50,250	1,211	3,601	5,551	58,270
2011–12	556,696	387,705	168,991	333,652	47,004	49,262	53,670	52,336	1,334	3,600	7,388	62,120
2012–13	573,911	397,074	176,837	337,191	47,721	52,982	56,984	55,564	1,420	3,580	9,809	65,644

\* STEM includes the following fields: Biological and biomedical sciences, Computer and information sciences, Engineering, Engineering technologies and engineering-related fields, Mathematics and statistics, and Physical sciences and science technologies. Engineering technologies and engineering-related fields excludes “Construction trades” and “Mechanic and repair technologies/technicians,” which are listed separately. The baseline has been recalculated from what was reported in the *FY 2013 Annual Performance Report and FY 2015 Annual Performance Plan* because of revised IPEDS data. Additionally, last year’s data included Military technologies and applied sciences, which is no longer included in the calculation.

\*\* Degree-granting institutions grant associate’s or higher degrees and participate in Title IV federal financial aid programs. Race categories exclude persons of Hispanic ethnicity. Reported racial/ethnic distributions of students by level of degree, field of degree, and sex were used to estimate race/ethnicity for students whose race/ethnicity was not reported. To facilitate trend comparisons, certain aggregations have been made of the degree fields as reported in the IPEDS Fall survey: “Agriculture and natural resources” includes Agriculture, agriculture operations, and related sciences and Natural resources and conservation; and “Business” includes Business management, marketing, and related support services and Personal and culinary services.

Data Source and Frequency of Collection: IPEDS Data Center; annually

U.S. Department of Education Indicators of Success	Baseline	2013 Actuals	2014 Actuals	2015 Actuals	2015 Current Year Targets	Current Year Results	2016 Out-Year Targets	2017 Out-Year Targets
1.4.A. Number of STEM postsecondary credentials awarded	AY: 2010–11 531,018	AY: 2010–11 531,018	AY: 2011–12 556,696	AY: 2012–13 573,911	595,000	<b>NOT MET</b>	638,000	691,000

NA = Not applicable.

TBD = To be determined.

Academic Year (AY) is a collegiate year spanning August–May; School Year (SY) spans August–July and is aligned with a P–12 school year; Fiscal Year (FY) corresponds to a federal fiscal year; Calendar Year (CY) spans January–December.

Data Sources and Frequency of Collection:

1.4.A. IPEDS Data Center; annually