

***EDUCATING TOMORROW'S WORKFORCE:***

***NEW MEXICO'S HIGHER EDUCATION FUNDING FORMULA FOR FISCAL YEAR 2013***

New Mexico Higher Education Department  
Dr. Jose Z. Garcia, Cabinet Secretary  
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Section 4J of Chapter 179, Laws of 2011 requires the Higher Education Department (HED) to “recommend revisions to the funding formula authorized by Section 21-2-5.1 NMSA 1978 no later than October 15, 2011.” To comply with this requirement, HED has developed this formula for calculating workload and funding needs for public higher education institutions in New.

This formula is considered a Model T. The new formula does not address a full range of higher education objectives, but, like the Model T, focuses on the basics – providing incentives for higher education institutions to achieve core objectives such as increasing the number of graduates, addressing workforce needs and increasing graduation of at-risk students. The Higher Education Department will build upon this core in the future.

Though the Model T is considered primitive by modern standards, it was a transformational vehicle in its time – forever changing the fundamentals of transportation. Similarly, the new funding formula represents a fundamental shift of focus in higher education funding. In the past, New Mexico calculated higher education workload based upon inputs – how much it cost to replace buildings and equipment, to pay for student services and utilities, to provide education and educational support to students who were present at the beginning of a course.

***The new funding formula shifts focus from funding higher education line items to funding statewide priorities, such as addressing statewide workforce needs. It shifts from funding inputs to funding performance.*** The Higher Education Department will use this formula to develop a higher education budget recommendation for fiscal year 2013 and beyond and will provide this recommendation to the executive and legislative branches as required by statute.

### **FY13 FUNDING FORMULA**

The fiscal year 2013 funding formula begins with the fiscal year 2012 instruction and general appropriation as a base. The FY12 base is adjusted to reflect increases in utilities costs in recent years.

Reflecting mission differentiation of the three sectors, the State of New Mexico will use three separate funding formulas for research universities, regional or comprehensive universities and two-year colleges.

#### **RESEARCH UNIVERSITIES**

Research universities are responsible for addressing statewide workforce needs for highly educated individuals, including producing doctorates, most professional advanced degrees, master’s degrees, and bachelor’s degrees. These institutions also conduct research and develop and transfer new technologies for private sector exploitation. Factors in the funding formula for research institutions will include:

**Completed student credit hours.** In the past, the funding formula was based heavily on the number of student credit hours enrollment on the 20<sup>th</sup> day of the semester. This created an incentive to recruit students into courses but not necessarily to complete them. The new formula includes a factor for completed student credit hours. Completed student credit hours include credit hours for all undergraduate and graduate courses for which a student received a letter grade, pass-fail grade or similar binary outcome, incomplete, or audit complete (excluding audited recreational physical education courses). Incompletes are included in this factor with the requirement that they must resolve to a grade. Audited courses will only be included for students who attend 80% of class meetings

through the semester. In New Mexico, research universities do not offer developmental, remedial or vocational/technical courses.

Dollars are assigned to completed student credit hours by calculating change over time for each institution using a three-year rolling average to smooth out bumps and dips that may occur in a single year that could create excessive funding instability for an institution.

In running the formula for FY13, HED will compare a two year rolling average (AY08-09 and AY09-10) with a three-year rolling average (AY08-09, AY09-10 and AY10-11). This reflects a decision that was made a year ago for the FY12 formula, which was based on a two-year rolling average (academic years beginning summer 2008 and 2009) with a plan to go to a three-year rolling average for FY13. Beginning in FY14, only three-year rolling averages will be used. Unfortunately, HED only began to collect student grade data in fall 2010, so completion numbers had to be estimated for prior school years. In the future, estimates will be replaced by actual data.

The dollar value of each course reflects the cost of delivering the course content and student support, set up in a three-by-three grid. For example, courses that require laboratory equipment are more expensive than standard classroom courses. Upper division and graduate courses tend to be more costly due to smaller class sizes and use of tenured or tenure-track instructors with doctoral degrees.

Formula Cost Factors			
Tier	Lower	Upper	Graduate
1	\$153.67	\$313.77	\$655.42
2	\$219.53	\$479.73	\$894.14
3	\$341.49	\$548.17	\$1,417.10

Each institution's annual completed student credit hours are sorted into a grid that follows the format of the cost factors above. An example might look like this:

Summary of SCH			
Tier	Level		
	Lower Division	Upper Division	Graduate
1	4,219	1,448	1,473
2	336	261	118
3	104	7	1
<b>TOTAL</b>	4,659	1,716	1,592
	<b>TOTAL SCH</b>		7,967

The grids for the three years will be averaged by cell. The averages will be multiplied by the amounts in the Formula Cost Factors grid for each rolling average. The difference between the total amounts of funding generated for the two rolling averages is presented as the change in workload. Completed student credit hours will be calculated at 45 percent of the change in these amounts.

**Number of degree and postgraduate certificate awards.** Experts on New Mexico workforce needs indicate that the state needs to produce more degrees and certificates in general. For research universities, the new formula includes a funding factor based upon the total number of undergraduate and graduate degrees and postgraduate certificates awarded by each institution.

To calculate this factor, all undergraduate and graduate degrees and postgraduate certificates produced by an institution in the most recent year for which data is available (2009-2010) are sorted into tiers, following the structure of the student credit hour tiers. An example is shown below.

Tier	2009-2010					
	Bach Degree	Master Degree	Doctorate	First Professional	Post Bachelor's Certificate	Post Master's Certificate
1	47				2	
2	21	24	3	18		
3	128	76	5			

The Funding Task Force's Finance Group estimated the cost of generating a degree or certificate based upon national cost standards for different levels of instruction, modified to reflect the tier structure from New Mexico. The resulting cost grid relevant to research universities appears below:

Tier	Bach Degree	Master Degree	Doctorate	1st Prof	Post Bach Cert	Post MA Cert
1	\$33,000	\$24,434	\$80,727	\$80,727	\$5,809	\$14,306
2	\$47,623	\$35,261	\$116,499	\$116,499	\$8,383	\$20,645
3	\$69,792	\$51,675	\$170,732	\$170,732	\$12,286	\$30,255

The two grids are multiplied to estimate the cost of generating the degrees produced that year. The funding factor for FY13 represents two percent of the total cost.

**Workforce Needs.** Nationally, technological innovation is driving change in the American economy. One study of future workforce needs explained:

“What is driving this transformation of the American economy? In a word: technology. In the 19th and 20th centuries, electricity and the internal combustion engine drove the rise of manufacturing and America’s shift away from an agrarian economy. Today, computers and related inventions are driving the information revolution and transforming the U.S. economic landscape once again.”

The study indicated that science, technology, engineering and mathematics (STEM) and healthcare professional and technical occupations are two occupational categories with the high concentrations of employees with some college or better and with high rates of growth in postsecondary attainment in the coming years.

For research universities, the new formula includes a funding factor based upon the total number of undergraduate and graduate degrees and postgraduate certificates awarded by each institution in the STEM and healthcare profession fields in the most recent year for which data is available (2009-2010). The calculation of this factor is almost identical to calculation of total awards, except the degrees are limited to Classification of Instructional Programs codes in the STEM and healthcare disciplines. The resulting calculation is funded at three percent of the total cost to produce the degrees.

**At-Risk Students.** The new formula includes a funding factor based upon the total number of undergraduate and graduate degrees and postgraduate certificates awarded by each institution to at-risk students. To determine degree and certificate awards that qualify for this factor, at-risk students are defined as undergraduate and graduate students who have an “expected family contribution amount” which would qualify them for a Pell grant in the year in which they earn their degree. While graduate students are not eligible to receive Pell grants, the same definition is applied to graduate students to determine if they are financially at-risk. The calculation of this factor is almost identical to calculation of total awards, except the degrees are limited to at-risk students. The resulting calculation is funded at three percent of the total cost to produce the degrees.

**Institutional Contribution.** Changes in workload funding needs will be adjusted to reflect changes in funding available to research universities from the state’s Land Grant Permanent Fund (LGPF). The LGPF was established to invest and distribute revenues from lands that were transferred by the federal government to New Mexico prior to statehood. Revenues derive from the sale of the lands and from royalties from leases and mineral and timber production on the lands, as well as from investment growth. Distributions from the LGPF are determined by the state constitution and other laws. LGPF beneficiaries in higher education are limited to four-year colleges and special schools.

**Expansion of the Formula in 2012.** During the 2012 interim, HED will work with research university leaders and staff to identify additional sector-specific formula factors. Concepts currently under discussion include a research factor, a quality factor, a progress factor and a factor that rewards success of transfer students.

### **COMPREHENSIVE UNIVERSITIES**

Comprehensive universities are responsible for addressing regional workforce needs for highly educated individuals, including producing master’s degrees and bachelor’s degrees. A few comprehensive universities also fulfill the regional role of a community college with regard to production of associates degrees and certificates. Factors in the funding formula for comprehensive universities include:

**Completed student credit hours.** Completed student credit hours will be defined as for research universities, except for the categories of courses that comprehensive universities provide. In addition to undergraduate and graduate courses, comprehensive universities may also provide developmental and trade/technical courses. Comprehensive universities are also distinguished from research universities in this factor in that they do not provide doctoral courses. As with research universities, completed student credit hours will be calculated at 45 percent of the change in workload value.

**Number of degree and postgraduate certificate awards.** To calculate this factor for comprehensive universities, all certificates, associates degrees, bachelor’s degrees and master’s degrees produced by an institution in the most recent year for which data is available (2009-2010) are sorted into tiers, following the structure of the student credit hour tiers. An example is shown below.

2009-10						
Tier	Certificates			Assoc Degree	Bach Degree	Master Degree
	<1 Year	1-2 Years	2-4 Years			
1	23	3		43	24	15
2		9		16	14	
3		17		41		

The Funding Task Force's Finance Group cost grid relevant to comprehensive universities appears below:

	Certificates			Assoc Degree	Bach Degree	Master Degree
	<1 Year	1-2 Years	2-4 Years	2-03	3-05	4-07
Tier 1	\$4,950	\$7,260	\$14,455	\$14,455	\$33,000	\$24,434
Tier 2	\$7,143	\$10,477	\$20,860	\$20,860	\$47,623	\$35,261
Tier 3	\$10,469	\$15,354	\$30,570	\$30,570	\$69,792	\$51,675

The two grids are multiplied to estimate the cost of generating the degrees produced that year. The funding factor for FY13 represents two percent of the total cost.

**Workforce Needs.** For comprehensive universities, the new formula includes a funding factor based upon the total number of certificates, associates, undergraduate and graduate degrees awarded by each institution in the STEM and healthcare professional fields in the most recent year for which data is available (2009-2010). The calculation of this factor is otherwise identical to calculation of workforce needs for research universities.

**At-Risk Students.** For comprehensive universities, the new formula includes a funding factor based upon the total number of certificates, associates, undergraduate and graduate degrees awarded by each institution to at-risk students, defined in the same way as for research universities.

**Institutional Contribution.** Changes in workload funding needs will be adjusted to reflect changes in funding available to comprehensive universities the LGPF.

**Expansion of the Formula in 2012.** During the 2012 interim, HED will work with comprehensive universities to identify additional sector-specific formula factors. Concepts currently under discussion include a quality factor, a progress factor and a factor that rewards success of transfer students.

### **COMMUNITY COLLEGES**

Community colleges have a distinctive mission from four-year institutions, responsible for vocational and technical education and general academic preparation leading to associate's degrees and certificates. Two-year colleges are often the first line resource in responding to the training needs of employers expanding or newly locating in the state. In New Mexico, the two-year colleges are also