New Model for Funding Higher Education in Nevada

The Nevada System of Higher Education (NSHE) appreciates the hard work of the members of the Legislative Committee to Study the Funding of Higher

Education (Chapter 375, *Statutes of Nevada 2011*) to help us develop a new funding formula that fairly and equitable distributes State funding among our higher education institutions. Taking into account the comments from the Committee, the public testimony and the reports of SRI International and the National Governors' Association (NGA), the NSHE believes the summary below captures the discussions to date, and we are supportive of a new formula that incorporates these concepts.

The model proposed by NSHE was based upon the belief that a new funding model was required that was equitable to all institutions, simpler and more transparent than the current formula, aligned with the goals of the State, based upon national best practices in higher education financing and the commitment of Nevada to the goals of Complete College America.

The new funding model discussed by the Committee consists of two basic components – a base formula driven by course completions and a performance pool driven by the goals of the State and clear metrics that measure the institutions efforts in meeting those goals. Each is summarized below.

The Base Formula. The base formula allocates state resources to teaching institutions based upon completed instruction as measured by student credit hours. Student credit hours are weighted by discipline cluster in an expanded matrix that is cost informed and independently developed by the National Center for Higher Education Management Systems. As a result of Committee deliberations, the working definition of completion has evolved to exclude F grades that result from non-attendance (this treatment is consistent with the treatment of completions for veterans by the Veterans Administration).

Funding is determined by measuring work completed, adjusted to support the research mission of the universities, with funding set-aside to support small community colleges and the operating and maintenance of dedicated research space at UNLV and UNR.

A fundamental premise of the new formula remains campus retention of fees and out of state tuition collected without offset of state general fund appropriations. Completions for nonresidents are therefore excluded from the tally of completed student credit hours and not funded by the state.

The complex set of drivers in the current formula for administrative support, institutional support, libraries, operations and maintenance and the like are compressed into the single driver of work completed measured by weighted student credit hours. State support, when combined with student fee revenues generated by an institution, would represent the total funding available to an institution in a given fiscal year. Each institutional President will be responsible for recommending to the Board of Regents for approval the allocation of these resources to the various functional areas (instruction, academic support, student services, etc) within the college or university budget. Institutional Presidents will have flexibility in establishing a budget plan

and institutional priorities, but also will be held accountable for final performance outcomes as measured by student success, increased grant funding, alignment with state goals and the like.

See **Appendix A** for the proposed matrix based on the above principles.

The Performance Pool. A pool of dollars will be distributed to the institutions based on their performance as measured by defined goals and published metrics. Metrics reflect the goals of the state and the respective mission of the institutions in the three tiers of the higher education system. Based upon the recommendations of SRI and the NGA, it appears that this pool will be funded with a "carve out" from state general fund appropriations. SRI and the NGA also recommend a pool that is significant enough in size to influence institutional behavior and it is suggested that a pool in the range of 15% of the total budget would achieve this result. The NGA also recommended that the funding of the pool be phased in and it is suggested that a three year implementation of 5, 10 and 15% would be appropriate.

The Committee recommended metrics for the performance pool that reflect the needs of the state for more graduates, greater alignment with the state's focus on economic development and diversification, and emphasis on success with at risk students. Metrics also reflect the specific missions of the respective campuses – greater research for the universities, transfer for the community colleges, and completion of gateway courses for all colleges.

See **Appendix B** for a proposed method of determining institutional points to be used in distribution of performance pool funds.

<u>Summary.</u> This new model will effectively shift the focus of formula funding from inputs (enrollments) to outputs (course completions and graduating students). It is intended to motivate institutional behavior that will increase degree productivity and contribute to the State's economy, and encourage and reward entrepreneurial behavior. Recognizing the public and private benefits of higher education, the proposed formula assumes that the State (in the form of appropriations) and the students (in the form of tuition and fees) each assume a reasonable portion of the total funding for public higher education in Nevada.

Importantly, the NSHE worked to recommend a formula that was equitable and simple. The proposed formula as summarized above clearly meets that goal.

<u>Implementation.</u> Implementation of a new formula within existing appropriation levels necessarily implies reallocation of resources. With the proposed model, the resource reallocation calls into question the viability of northern community colleges to continue to serve their respective service areas. The precipitous decline in state funding that could result for northern community colleges will require a phased implementation and other mitigation measures including possible funding from local entities. Consistent with prior formula studies, it is suggested that the Committee recommend to the Governor, Board of Regents, and ultimately the 77th Session of the Nevada Legislature that implementation occur over two biennia with general fund support to limit budget reductions during that time.

APPENDIX A - DISCIPLINE CLUSTERS AND WEIGHTS

APPENDIX A - DISCIPLINE C	Lower	Upper		
Discipline Cluster	Division	Division	Master's	Doctoral
Liberal Arts, Math, Social Science, Languages, Other	1.0	2.0	4.0	5.0
05. Area, Ethnic, Cultural & Gender Studies	1.0	2.0	4.0	5.0
09. Communication, Journalism & related programs	1.0	2.0	4.0	5.0
16. Foreign Languages, Literature and Linguistics	1.0	2.0	4.0	5.0
19. Family & Consumer Sciences/Human Sciences	1.0	2.0	4.0	5.0
23. English Language & Literature/Letters*	1.0	2.0	4.0	5.0
24. Liberal Arts & Sciences, General Studies	1.0	2.0	4.0	5.0
25. Library Sciences	1.0	2.0	4.0	5.0
27. Mathematics & Statistics*	1.0	2.0	4.0	5.0
28. Reserve Officer Training Corps	1.0	2.0	4.0	5.0
29. Military Technologies	1.0	2.0	4.0	5.0
30. Multi/Interdisciplinary Studies	1.0	2.0	4.0	5.0
38. Philosophy & Religious Studies	1.0	2.0	4.0	5.0
42. Psychology & Applied Psychology	1.0	2.0	4.0	5.0
45. Social Sciences	1.0	2.0	4.0	5.0
54. History	1.0	2.0	4.0	5.0
99. Honors Curriculum and other	1.0	2.0	4.0	5.0
Basic Skills	1.5	n/a	n/a	n/a
32. Basic Skills				
Business	1.0	2.0	4.0	6.0
44. Public Administration & Social Services	1.0	2.0	4.0	6.0
52. Business Mgmt, Marketing & related services	1.0	2.0	4.0	6.0
Education	1.5	2.0	2.5	5.0
13. Education	1.5	2.0	2.5	5.0
Services	1.5	2.0	3.0	4.0
31. Parks, Recreation, Leisure & Fitness Studies	1.5	2.0	3.0	4.0
12. Personal & Culinary Services	1.5	2.0	3.0	4.0
43. Security & Protective Services	1.5	2.0	3.0	4.0
Visual and Performing Arts	1.5	2.5	5.0	5.0
50. Visual and Performing Arts	1.5	2.5	5.0	5.0
Trades/Tech	2.0	2.5	n/a	n/a
46. Construction Trades	2.0	2.5	n/a	n/a
47. Mechanic Repair Technologies/Technicians	2.0	2.5	n/a	n/a
48. Precision Production	2.0	2.5	n/a	n/a
49. Transportation & Materials Moving	2.0	2.5	n/a	n/a
Sciences	2.0	3.0	5.0	8.0
01. Agriculture, Agriculture operations & related	2.0	3.0	5.0	8.0
03. Natural Resources & Conservation	2.0	3.0	5.0	8.0
11. Computer & Information Sciences	2.0	3.0	5.0	8.0
26. Biological & Biomedical Sciences	2.0	3.0	5.0	8.0
40. Physical Sciences	2.0	3.0	5.0	8.0
Law	2.0	2.0	4.0	4.0
22. Legal Professions and Studies	2.0	2.0	4.0	4.0
Engineering/Architecture	2.0	3.0	5.0	8.0
04. Architecture	2.0	3.0	5.0	8.0
14. Engineering	2.0	3.0	5.0	8.0
15. Engineering Technologies/Technicians	2.0	3.0	5.0	8.0
Health	2.0	2.0	5.0	6.0
51. Nursing, Allied Health, Health Professions	2.0	2.0	5.0	6.0

^{*}includes remedial courses at the colleges only

The instructional matrix is divided into eleven discipline clusters that are assigned weights for various course levels (e.g. lower division, upper division, master's, doctoral) using relative cost data from studies conducted in Texas, Illinois, Ohio and Florida. These are states that have successfully used cost studies in formula funding. The matrix is then applied to completions using the NSHE course taxonomy. This matrix assigns weights based on a student's progression to degree completion (e.g. upper division is weighted more than lower division, etc.) and will further provide for funding based on the discipline cluster as recommended by NCHEMS (e.g. clinical and science, technology, engineering and math (STEM) fields will have greater weights than liberal arts).

The completed student credit hours are multiplied by the weight assigned in the instructional matrix to determine the weighted student credit hours for each institution. Weighted student credit hours (WSCH) for each institution will be multiplied by an average *price* that will initially be determined based on the current state appropriation less the cost of any adjustments for small institutions and O&M costs directly related to university research facilities. This average *price* is the amount the formula will generate for each weighted student credit hour – effectively establishing a system-wide price for course completions. The average *price* will be applied to the institutional WSCH to determine base funding for each institution.

NSHE PERFORMANCE POOL MODEL FOR CONSIDERATION (v20)

UNIVERSITY PERFORMANCE OUTCOMES AND POINTS (2010-11)

			UNLV		UNR	Total
OUTCOMES	Weights	UNLV	Weighted	UNR	Weighted	Weighted
			Pts.		Pts.	Points
Bachelor's Degrees	40%	3,771	1,508.4	2,412	964.8	2,473.2
Master's and Doctoral Degrees	10%	1,427	142.7	748	74.8	217.5
Sponsored/External Research Expenditures in \$100,000's	15%	497.3	74.6	937.6	140.6	215.2
Transfer Students w/a transferable associate's degree	5%	967	48.4	1,055	52.8	101.1
Efficiency - Awards per 100 FTE	10%	26.4	2.6	23.8	2.4	5.0
At Risk Graduates (minority and low income)	5%	2,218	110.9	770	38.5	149.4
Economic Development (STEM and Allied Health) Graduates	15%	857	128.6	1,009	151.4	279.9
TOTAL WEIGHTED POINTS	100%		2,016.1		1,425.2	3,441.4
DISTRIBUTION OF POINTS			58.6%		41.4%	100.0%

NSC PERFORMANCE OUTCOMES AND POINTS (2010-11)

			NSC
OUTCOMES	Weights	NSC	Weighted
			Pts.
Bachelor's Degrees	60%	262	157.2
At Risk Graduates (minority and low income)	5%	153	7.7
Gateway Course Completers	5%	831	41.6
Transfer Students w/a transferable associate's degree	5%	277	13.9
Efficiency - Awards per 100 FTE	10%	13.0	1.3
Economic Development (STEM and Allied Health) Graduates	15%	118	17.7
TOTAL WEIGHTED POINTS	100%		239.3

COMMUNITY COLLEGE OUTCOMES AND POINTS (2010-11)

	Weights	TMCC		CSN		GBC		TMCC		WNC	Total
OUTCOMES	(except	Weights	CSN	Weighted	GBC	Weighted	TMCC	Weighted	WNC	Weighted	Weighted
	TMCC)	Weights		Pts.		Pts.		Pts.		Pts.	Points
1 to 2 Year Certificate	15%	15%	221	33.2	192	28.8	60	9.0	33	5.0	75.9
Workforce Recognized Certificates	TBD	TBD									
Associate's Degrees	30%	35%	2,030	609.0	249	74.7	1,082	378.7	450	135.0	1,197.4
Bachelor's Degrees	5%	n/a	20	1.0	55	2.8	N/A	N/A	11	0.6	4.3
Transfer Students w/24 credits or associate's degree	10%	10%	2,439	243.9	35	3.5	1,332	133.2	189	18.9	399.5
Efficiency - Awards per 100 FTE	10%	10%	10.3	1.0	19.8	2.0	17.6	1.8	16.9	1.7	6.5
Gateway Course Completers	10%	10%	12,377	1237.7	1,050	105.0	4,064	406.4	1,530	153.0	1,902.1
At Risk Graduates (minority and low income)	5%	5%	1,367	68.4	205	10.3	688	34.4	290	14.5	127.5
Economic Development (STEM and Allied Health) Graduates	15%	15%	743	111.5	55	8.3	160	24.0	114	17.1	160.8
TOTAL WEIGHTED POINTS	100%	100%		2,305.6		235.2		987.5		345.7	3,874.0
DISTRIBUTION OF POINTS				59.5%		6.1%		25.5%		8.9%	100.0%

Outcome	Definitions
1 to 2 year Certificate	The total number of certificates requiring 30 or more credit hours granted during an academic year. Students earning multiple certificates in an academic year will have each earned certificate count as a separate outcome.
Workforce Recognized Certificates	The total number of certificates recognized by industry. This outcome is being developed as NSHE works with the institutions and national organizations to identify the appropriate workforce certificates in the category of less then one-year training.
Associate's Degrees	The total number of associate's degrees conferred during an academic year. Students earning multiple degrees in an academic year will have each earned degree count as a separate outcome.
Bachelor's Degrees	The total number of bachelor's degrees conferred during an academic year. Students earning multiple degrees in an academic year will have each earned degree count as a separate outcome.
Master's Degrees	The total number of master's degrees conferred during an academic year. Students earning multiple degrees in an academic year will have each earned degree count as a separate outcome.
Doctoral Degrees	The total number of doctoral degrees conferred during an academic year. First-professional degrees (medical, dental, law) are not included. Students earning multiple degrees in an academic year will have each earned degree count as a separate outcome.
At-Risk Graduates (minority and low income)	Total unduplicated number of minority or Pell grant eligible students who graduated during an academic year with a certficate, associate's or bachelor's degree.
Transfer Students w/a Transferable Associate's Degree	Total number of students transferred to a 4-year institution with a transferable associate's degree from an NSHE community college.
Transfer Students w/24 credits or Associate's Degree	The total number of students who enrolled at a four -year institution during the fall or spring semester of a given reporting year who had earned at least 24 credits or a transferable associate's degree at a community college prior to the reporting year. Students are excluded if they are co-enrolled at a 4-year institution and a 2-year institution during the term in which they otherwise would have been included as a transfer student. (Excludes courses from the 24 credit count if the grades are AU, AD, NR, ND, X, I, F, U, W.)
Efficiency - Awards per 100 FTE	The number of bachelor's, master's and doctoral awards per 100 FTE at 4-year institutions and the number of certificates, associate's and bachelor's (where applicable) per 100 FTE at the 2-year institutions.
Sponsored/External Research Expenditures	The total amount expended on sponsored programs/projects of research and other scholarly activities for the fiscal year. This amount includes federal, federal pass-through, State of Nevada, other state and local government, private for-profit, private non-profit. Other scholarly activity includes the instructional, public service, student services, and "other" functional grant categories, including workforce development. The figures exclude the scholarship/fellowship category.
Gateway Course Completers	The total number of students (unduplicated) who successfully completed a college-level English or mathematics course (grad C- and above) in the reporting year.
STEM and Allied Health Graduates	Total number of certificates, associate's, bachelor's, master's, or doctoral degrees awarded (first professional awards are excluded) in an academic year based on CIP codes for STEM and health professionals as identified by NCHEMS for the NGA metrics. (CIPs: 4 - architecture and related services; 11 - computer and information sciences and support services; 14 - engineering; 15 - engineering technologies/technicians; 26 - biological and biomedical sciences; 27 - mathematics and statistics; 40 - physical sciences; 41 - science technologies/technicians; and 51 - health professions and related clinical sciences)

APPENDIX C

Formula Funding Proposal

General Fund Only State Budget with adjs for univs Research, Small Institution factor, and univs O&M research space

WSCH for Resident Credit Hours only - FY12 annualized and projected flat to FY14

TTO GITTOT TRESTACTIVE GITCART TITO GITC GIT	.,
	FY 12
	Oper Budget
Formula Budgets	Gen Fund
UNR	92,294,710
UNLV	123,898,221
CSN	77,587,864
GBC	14,031,554
TMCC	30,603,292
WNC	15,029,964
NSC	9,111,439
Sub-Total FB's	362,557,044
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FY 14		Small	FY 14	FY 14	FY 14
WSCH		Institution	O&M	Gen Fund	GF Incr/Decr
w/o NRSCH	\$/WSCH	Factor	Research Space	Distribution	over FY12 GF
659,685	\$132.56		3,582,891	91,029,780	(1,264,930)
934,511	\$132.56		3,218,775	127,096,200	3,197,979
638,374	\$132.56			84,621,933	7,034,069
63,041	\$132.56	1,108,770		9,465,394	(4,566,160)
209,107	\$132.56			27,718,921	(2,884,371)
72,985	\$132.56	810,450		10,485,236	(4,544,728)
91,579	\$132.56			12,139,580	3,028,141
2,669,282		1,919,220	6,801,666	362,557,044	0
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Sub-Total FB's	362,557,044
Non-Formula Budgets	
System Administration	4,506,815
University Press	473,285
Special Projects	1,946,486
System Comp Services	16,669,848
WICHE	876,119
Intercollegiate Athletics - UNR	4,850,244
Statewide programs - UNR	3,256,905
Cooperative Extension Service	7,460,169
Agricultural Experiment Station	4,959,258
Business Center North	1,828,181
School of Medicine	29,906,783
State Health Lab	1,518,317
Intercollegiate Athletics - UNLV	6,988,826
Statewide programs - UNLV	2,502,209
Business Center South	1,583,585
Law School	6,909,123
Dental School	7,005,286
Perkins Loans	35,793
Desert Research Institute	7,421,572
Sub-Total NFB's	110,698,804
Total NSHE GF Revenues	473,255,848
Total Formula Budgets	362,557,044
Less: SIF & O&M carve out	8,720,886
Net GF allocation-formula budgets	353,836,158
Total WSCH-includes research adj	2,669,282
\$/WSCH	\$132.56

WSCH - Weighted Student Credit Hours NRSCH - Non Resident Student Credit Hours

Small Institution Factor - \$1.5M Cap phased out between 50K to 100K WSCH O&M Carve out - State funded research space

Research factor of 1.10 applied against universities upper division and graduate WSCH Resident students credit hours only

Adjustments to FY12 Operating Budget:

UNR GF adjusted by <\$2.9M> for rechg adjmt - AES, CES, ICA, and S/W increased UNLV GF adjusted by <\$3.12M> for rechg recalc - LS, DS, ICA, and S/W increased

WSCH projection methodology - FY12 annualized WSCH projected to FY14 $\,$

UNR and UNLV O&M recharge & research space adjustments pending further verification