

**South Dakota  
Public Higher Education System**

# **Opportunities Plan**

**A Report to the South Dakota Legislature  
November 2006**



*Office of the Executive Director*



## Message from the Executive Director

The Board of Regents is pleased to submit the following Opportunities Plan to the South Dakota Legislature as requested by action of the 2006 session. Any plan offered is only as good as the understanding that it is a framework for the actions of all partners. Seeing clearly those individual requirements of five years in the future—let alone 10, 15, or 20 years—is a challenge that is never satisfied. We can anticipate a future from the eyesight of today, and we can establish a framework for addressing those issues that appear to be the core for future higher education needs and requirements in South Dakota. That is what we have attempted to do with this plan. It is a state-level view, not an institutional one. It is a road map, not an inventory of detailed actions to come. It is goal oriented, not an action agenda. It will provide policymakers, and system and institutional leadership, with a context for the operational decisions to come in the time period before us.

As this Opportunities Plan was developed, it was done with an appreciation for the role that public-sector higher education plays within the larger environment of higher education opportunity. Public universities are not the sole players in meeting necessary state outcomes, but they are by far the largest producers of higher education outcomes in South Dakota. In performing the responsibilities of the public institutions, it will continue to be necessary for the public universities to interact with and collaborate with other higher education sectors—tribal institutions, technical institutes, and private and proprietary colleges and universities. These relationships will continue to be advanced. Further, the solid relationships built in recent years with the K-12 education community will be a continued focus necessary to achieve the long-term goals outlined for the state.

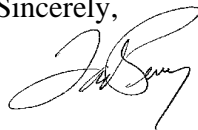
There is a national urgency to address higher education attainment. For future South Dakota citizens to have the same quality of life that their parents enjoyed, we need to be attentive to what the rest of the international community is doing to create a more highly educated population. Our challenge is immediate and real. The directions in this Opportunities Plan are a guide for South Dakota to take this seriously and to do it now.

Let there be no doubt about the need to invest in public education in order to achieve what is outlined in the pages to follow. Any outcomes that advance the state's policies and goals will require financial support. This is true for the whole continuum of education, including the need for significant new investments to produce more college graduates and to develop the innovation and research culture.

There should also be no doubt that South Dakota's future will demand the combined efforts of all six traditional residential public universities, as well as the growing educational centers in Pierre, Sioux Falls, and Rapid City and the Electronic University Consortium to meet the needs of non-traditional populations.

This is a special time of opportunities in South Dakota. The Board of Regents and the leadership of our system and institutions look forward to working with state policymakers and citizens to ensure a future for South Dakota that advances our quality of life.

Sincerely,



Robert T. Tad Perry  
Executive Director



# Opportunities Plan for South Dakota

## Introduction and Background

The South Dakota Opportunities Plan is being presented to the South Dakota Legislature in fulfillment of the Legislature's directive from the 2006 session (House Bill 1238). The plan is intended to provide insight into the critical issues confronting higher education in South Dakota, responses made by the Board of Regents to these situations, and expectations for South Dakota's public higher education system during the first decades of the 21st century.

## South Dakota's Higher Education Situation

- The state's work force population (ages 25-64) will increase during the first quarter of this century.
- The state's traditional higher education population (ages 18-24) will decrease over the next two decades.
- The surrounding states will experience the same decline in traditional college-age students in their populations.
- The state does not have a comprehensive university in either of the two largest urban areas of the state.
- There is a need to increase the number of college graduates by 20 percent (U.S. Bureau of Labor Statistics) during the first two decades of the 21<sup>st</sup> century. The United States has fallen from a top position internationally to 8<sup>th</sup> in college attainment of its population. South Dakota must contribute to the response in re-establishing this nation as the world's best-educated society.

## Assumptions and Guiding Principles of the Opportunities Plan

The development of the Opportunities Plan was guided by the state's political history:

**First**, the South Dakota Board of Regents was created by the state's Constitution. In that fundamental law, the state's citizens provided:

*Board to govern state educational institutions. The state university, the agriculture college, the school of mines and technology, the normal schools, a school for the deaf, a school for the blind, and all other educational institutions that may be sustained either wholly or in part by the state shall be under the control of a board of five members appointed by the Governor and confirmed by the senate under such rules and restrictions as the Legislature shall provide. The Legislature may increase the number of members to nine.* (Article XIV, Section 3, South Dakota Constitution)

**Second**, the South Dakota Legislature establishes public universities. Only the Legislature may enact laws establishing universities or repeal existing laws. The Board of Regents governs the universities established by the Legislature, consistent with the purposes provided in law. The missions of universities are provided for in state statutes:



**Black Hills State University, SDCL 13-59-1**

The primary purpose of Northern State University, at Aberdeen in Brown county, and Black Hills State University, at Spearfish in Lawrence county, is the preparation of elementary and secondary teachers, and a secondary purpose is to offer pre-professional, one-year and two-year terminal and junior college programs. Four-year degrees other than in education and graduate work may be authorized by the Board of Regents.

**Dakota State University, SDCL 13-59-2.2**

The primary purpose of Dakota State University in Madison in Lake county is to provide instruction in computer management, computer information systems, electronic data processing and other related undergraduate and graduate programs. The secondary purpose is to offer two-year, one-year and short courses for application and operator training in the areas authorized by this section.

This authorization includes the preparation of elementary and secondary teachers with emphasis in computer and information processing.

Except for degree programs in existence during the 1983-1984 academic year, the unique baccalaureate programs authorized for Dakota State University shall not be duplicated by the Board of Regents.

**Northern State University, SDCL 13-59-1**

The primary purpose of Northern State University, at Aberdeen in Brown county, and Black Hills State University, at Spearfish in Lawrence county, is the preparation of elementary and secondary teachers, and a secondary purpose is to offer pre-professional, one-year and two-year terminal and junior college programs. Four-year degrees other than in education and graduate work may be authorized by the Board of Regents.

**South Dakota School of Mines & Technology, SDCL 13-60-1**


The South Dakota School of Mines & Technology, formerly the state school of mines, located at Rapid City, in Pennington county, shall be under the control of the Board of Regents and shall provide undergraduate and graduate programs of instruction in engineering and the natural sciences and other courses or programs as the Board of Regents may determine.

**South Dakota State University, SDCL 13-58-1**

Designated as South Dakota's land-grant university, South Dakota State University, formerly the state college of agriculture and mechanical arts, located at Brookings, in Brookings county, shall be under the control of the Board of Regents and shall provide undergraduate and graduate programs of instruction in the liberal arts and sciences and professional education in agriculture, education, engineering, home economics, nursing and pharmacy, and other courses or programs as the Board of Regents may determine.

**University of South Dakota, SDCL 13-57-1**

Designated as South Dakota's liberal arts university, the University of South Dakota, established and located at Vermillion, in Clay county, shall be under the control of the Board of Regents and shall provide undergraduate and graduate programs of instruction in the liberal arts and sciences and professional education in business, education, fine arts, law and medicine, and other courses or programs as the Board of Regents may determine.



**Third**, the Opportunities Plan was created within the environment of Governor Mike Rounds' 2010 Initiative for economic development and his 2010 Education Initiative, which calls for the South Dakota higher education system to “fully meet the needs of the state’s changing economy and its citizens” through the following objectives:

**Objective 3A:** Offer transferable general education courses at all technical institute sites, and establish up to 250 program-specific transfers for technical institute graduates at Board of Regents’ institutions.

**Objective 3B:** Expand the number of citizens with postsecondary education and training by 20 percent.

**Objective 3C:** Support postsecondary education programs designed to enhance the state’s long-term economy.

**Objective 3D:** Recruit and retain quality faculty and staff.

**Objective 3E:** Double the number of students receiving South Dakota Opportunity Scholarships.

The Opportunities Plan rests on the following assumptions:

- All existing university campuses will continue with a primary service mission for traditional college-age students.
- Each university will have its own president, will continue to be responsible for its own regional and specialized accreditation, and will have its own alumni association and foundation.
- Service to traditional students at the existing residential university campuses will be stable as a result of increased proportions of high school graduates attending public universities and increased emphasis on retaining matriculating students.
- There will be an increasing need to provide educational services to the non-traditional student

(24-55 years of age). This will require increased service to non-traditional students at off-campus locations such as South Dakota Public Universities and Research Center, Capital University Center, Higher Education Center-West River and through the Electronic University Consortium.

- There will be a continuing need to maximize the use of available funding resources, including consolidation of positions and services where practical and economical. Public universities will make stronger and more focused connections to the needs of the state and its economy.
- The universities and off-campus centers will contribute to the social, economic, and cultural environments of their respective regions.

## Vision for South Dakota

1. South Dakota will have a population that reflects the synergy of an educated populace—proportions of the population graduating from high school and college and with graduate degrees will be among the nation’s best, and those holding college degrees will have access to resources that meet their continuing needs to change and upgrade credentials while in the workforce.
2. South Dakota will have a growing working-age population (25-55 years of age) that has the education needed to support a growing knowledge-based economy.
3. South Dakota will increasingly benefit from a significant increase in research and development (R&D) work, as evidenced by an enhanced rank among the states in R&D investments, patents, and copyrights.
4. South Dakota will be a national leader in the use of information technology to enhance the state’s educational, economic, social, scientific, and political development.

## Policy Goals for the System of Public Higher Education

## Governor Rounds' 2010 Education Initiative

Public higher education has a significant role in contributing to the state's progress in the 21<sup>st</sup> century. An alignment of state and public higher education goals is necessary to achieve these prospects. The following higher education policy goals will guide the Board of Regents and the universities over the next several years:

### Policy Goal #1

**Access: Every qualified South Dakotan shall have access to public postsecondary education.**

#### 1. Strengthen the connection of universities in the preparation for postsecondary education in the K-12 community.

- a. Extend outreach activities of the university system to K-12 schools.
- b. Provide college preparatory curriculum opportunity for all students.
- c. Provide dual credit opportunities for all students.

d. Provide incentives for students to take rigorous college preparatory curriculum.

- e. Enhance information available to parents, students, school personnel, and the public on the connection between secondary and postsecondary education.
- f. Public universities will improve the preparation of K-12 teachers to meet increased student curriculum expectations.

### 2010 Education Goal 2:

**By 2010, South Dakota will be first in the nation for the percentage of students going on to college, technical school, or advanced training.**

### 2010 Education Objective 3E: Double the number of students receiving SD Opportunity Scholarships.

- a. Implement rigorous high school graduation requirements.
- b. Strengthen SD CollegePrep program.
- c. Develop approved high school course inventories.
- d. Standardize scholarship application process through single point of review.

## Policy Goals for the System of Public Higher Education

## Governor Rounds' 2010 Education Initiative

### 2. Educate a greater proportion of high school graduates and the adult working population.

- a. Increase the public university share of South Dakota high school graduates.
- b. Increase the retention of South Dakota students entering the universities.
- c. Increase the proportion of the adult population (ages 25-55) enrolled in a public university.
- d. Integrate university general education at the technical institute locations and in Pierre to enhance student mobility in postsecondary education programs.

- e. Increase coordination of curriculum with technical institutes to eliminate duplication of college transfer courses, including the offering of university courses at technical institute locations.

### **2010 Education Objective 3A: Offer transferable general education courses from Board of Regents' institutions at all technical institute sites, and establish up to 250 program-specific transfers for technical institute graduates at regents' institutions.**

- a. Approve institutional agreements with technical institutes.
- b. Increase the number of program-to-program articulation agreements from four to 250.
- c. Prepare marketing plan to promote program.





## Policy Goals for the System of Public Higher Education

## Governor Rounds' 2010 Education Initiative

### 3. Increase retention and graduation rates.

- a. Increase the proportion of entering students who stay in the public university system.
- b. Increase the proportion of entering students who graduate from a public university.
- c. Increase the yield of college graduates relative to the high school graduation rate.
- d. Increase the attractiveness of the public universities to non-resident students.
- e. Enhance private fund raising for student scholarships.

### 2010 Education Objective 3B: Expand the number of citizens with postsecondary education and training by 20 percent.

- a. Increase the number of graduates from Board of Regents' associate degree programs by 10 percent.
- b. Increase the number of graduates from bachelor degree programs by 20 percent.
- c. Double the number of persons ages 25 and older engaged in postsecondary education.
- d. Increase the retention of students in public higher education by 8 percent.

## Policy Goals for the System of Public Higher Education

## Governor Rounds' 2010 Education Initiative

### Policy Goal #2

**Academic Quality and Performance: South Dakota public universities and special schools shall provide a quality educational experience.**

#### **4. Hire and retain the best available talent pool in teaching, research, and administration.**

- a. Reduce the gap between salaries in the system and those in surrounding states.
- b. Enhance private fund raising for academic support.

#### **2010 Education Objective 3D: Recruit and retain quality faculty and staff.**

- a. Complete the Board of Regents' salary competitiveness program by reaching surrounding states' average.

#### **5. Adapt instruction to contemporary technology.**

- a. Increase the use of technology in all instruction.
- b. Adjust technology literacy requirements for students to match changes in new student population experiences.

#### **6. Increase rigor of student academic experiences.**

- a. Include major field nationally normed assessment in capstone experiences and record percentile scores for all students.
- b. Increase the writing and speech communications expectations for all students throughout the curriculum.

## Policy Goals for the System of Public Higher Education

## Governor Rounds' 2010 and 2010 Education Initiatives

### Policy Goal #3

**State Wealth: South Dakota public universities shall engage in activities designed to enhance the state's long-term economy.**

#### 7. Enhance research and development productivity through grants and contracts.

a. Increase contract and grant activity at all public universities.

#### 2010 Objective 3B: Improve ranking to at least 30th nationally for NSF funding.

- Work toward graduating from NSF EPSCoR.
- Fund EPSCoR match.
- Develop a nanotechnology center.

b. Enhance research and development activity in select graduate programs in science, health, engineering, and information technology.

#### 2010 Education Objective 3C: Support postsecondary education programs designed to enhance the state's long-term economy.

- a. Double the number of Ph.D. programs.
- b. Double the number of Ph.D. graduates.
- c. Enhance Ph.D. program support infrastructure.
- d. Achieve the national average of people with graduate degrees, moving from 6.5 percent to 9.5 percent.
- e. Double technical institutes' market penetration.

c. Concentrate research investments in areas important to the state.

#### 2010 Objective 3A: Secure Homestake Mine for use as an underground science laboratory.

- Establish a Homestake Conversion Lab Project.
- Commit funding to ensure federal approval.

## Policy Goals for the System of Public Higher Education

## Governor Rounds' 2010 Initiative

- d. Increase quality of graduate programs, including recruitment of graduate students and competitiveness of assistantships.

### 8. Increase the universities' role in stimulating economic activity in the state.

- a. Increase alliances with businesses and economic development leaders that contribute to growing and attracting new jobs.
- b. Increase the number of graduates in academic disciplines critical to the South Dakota economy, especially in the health sciences.
- c. Increase the level of contract technical assistance and R&D with South Dakota enterprises.
- d. Increase the number of patents and copyrights issued to public universities.

**2010 Objective 3C: Develop research and technology infrastructure at our universities and with the private sector. (Emphasis on research that can be commercialized and will benefit South Dakota.)**

### 9. Teach more entrepreneurship skills to students and faculty.

- a. Provide minors in entrepreneurship at each university.
- b. Provide faculty and student development opportunities focused on how to transfer new knowledge into economic activity.
- c. Increase internships and mentoring relationships with South Dakota entities.
- d. Increase the number of graduates with field experience in their discipline.



## **Policy Goals for the System of Public Higher Education**

### **Policy Goal #4**

**Efficiency: South Dakota public universities and special schools shall continue to seek means for improving efficiency in the delivery of educational services.**

**10. Increase effective use of the state's limited resource base.**

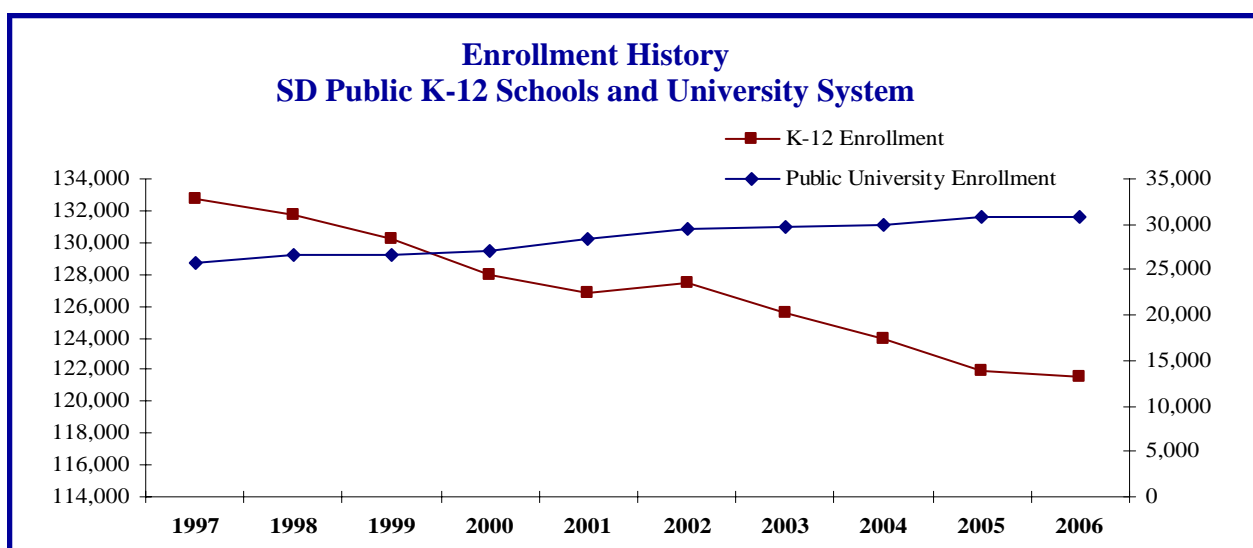
- a. Change system processes and structures to maximize resource use.
- b. Substitute new curriculum for unnecessary and dated curriculum.
- c. Manage workload assignments to maximize use of available total system resources.
- d. Collaboratively use technology to deliver instructional services.

## Opportunity: High School Graduates Prepared for College

**Increasing the readiness preparation of students for life beyond high school is a critical component in student attainment and success in postsecondary institutions.**

### Current Situation

- 105,861 pieces of College Prep information were distributed to students in grades 7-12 and their parents in the past year.
- 58 percent of the 75 percent of high school graduates who took the ACT test, or 43 percent of the total number of graduates, took the ACT core curriculum.
- Students taking the core curriculum outperformed non-core curriculum students on the ACT composite 22.8 to 20.2.
- Students taking the core curriculum outperformed non-core curriculum students on the ACT math sub-test 22.7 to 19.9.
- The more math taken by students, the higher the math sub-test score on the ACT—four years: 24.4, three years: 19.0, two years: 17.4.
- 69.2 percent of South Dakota high school students who entered the public universities were prepared for all college-level work, up from 66.1 percent in 2000.
- 24.8 percent of entering South Dakota freshmen required remedial work in math in fall 2005.
- 14.4 percent of entering South Dakota freshmen required remedial work in English in fall 2005.
- NSU's E-learning Center serves 852 students with 17 different courses in upper-level math and science, foreign languages, and AP classes at 77 school districts.
- 472 high school students in fall 2005 (5 percent of 9,109 spring 2006 graduates) were enrolled in college-level courses taught by the public universities, up from 312 in 2001.
- 10.5 percent of the 2006 high school graduates were enrolled as South Dakota Opportunity Scholars in fall 2006, up from 8 percent of the 2004 high school graduates.
- 36 percent of 2006 high school graduates taking the ACT exam scored 24 or above.



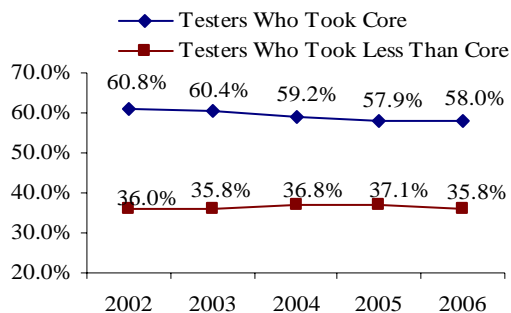
## Responses to Opportunity

1. New high school graduation requirements were implemented beginning with entering high school freshmen in fall 2006 that require a college-prep curriculum as the default curriculum.
2. Fully fund and implement the South Dakota Opportunity Scholarship program—FY08 will be the fourth and final year of fully implementing the scholarship.
3. Continue to make the NSU E-learning Center curriculum available to high school students, especially those in small rural districts, who do not have course options at their local schools.
4. Continue distributing College Prep material and information to students and school counselors.
5. Provide Web-based information to students, parents, and school personnel on South Dakota Opportunity Scholarship curriculum requirements for each high school.
6. Provide opportunities through the NSU Rising Scholars Program for high school students to take college-level courses.
7. Provide opportunities for online and distance education college courses for students throughout the state.

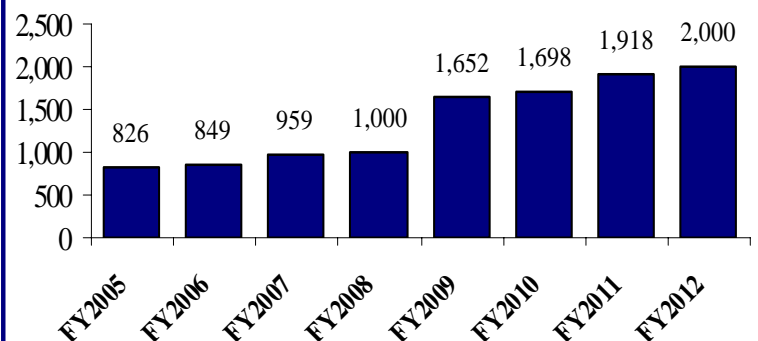
## Future Directions

1. Double the number of students who are eligible for the South Dakota Opportunity Scholarship.
2. Enhance the incentive by doubling the funding of South Dakota Opportunity Scholarships to a level equivalent to what other states offer their students.
3. Ensure funding stability by indexing the funding for the South Dakota Opportunity Scholarship so that the scholarship will retain its value over time.
4. Adopt an incentive program for high school students to enroll in college courses by having the state pay the course tuition and fees.
5. Increase the number of students served by the NSU E-learning Center to 1,200.
6. Increase proportion of high school students taking college-level courses (at a higher education instructional site, in the Rising Scholars program, or online) to 10 percent of spring high school graduates.
7. Adopt requirement that all high school juniors take the ACT exam, which will provide information to school districts on those students who need to remediate themselves in English or math before entering college.
8. Reduce the share of South Dakota freshmen entering public universities who need remedial work by 50 percent.

### Percent of HS Graduates Who Sat for the ACT Exam and Took Core Curriculum



### Projected Growth of SD Opportunity Scholarships



## *Opportunity: Retention and Graduation of University Students*

The most important product of higher education is the number of students who graduate with degrees.

### **Current Situation**

1. 48 percent of the public universities' new bachelor-degree students in 1999 completed their degrees in 150 percent of degree time.
2. 72 percent of new degree-seeking undergraduate students enrolled in the public universities in 2005 were retained in the system one year later.
3. The higher the ACT score the greater proportion of the population that is retained.
4. New high school graduation requirements will assist in improving student preparation for university success.

### **Fall 2005 New Degree-Seeking Undergraduate Students, Enrollment in Fall 2006**

Board of Regents Fact Book FY07

	<b>BHSU</b>	<b>DSU</b>	<b>NSU</b>	<b>SDSMT</b>	<b>SDSU</b>	<b>USD</b>	<b>System</b>
<b>New Degree Seeking Fall 2005</b>	660	314	383	372	1,878	1,165	4,772
<b>Enrolled in Same University in Fall 2006</b>	327	199	216	275	1,427	807	3,251
<b>Percent Retained</b>	<b>50%</b>	<b>63%</b>	<b>56%</b>	<b>74%</b>	<b>76.0%</b>	<b>69%</b>	<b>68%</b>
<b>Enrolled in the System in Fall 2006</b>	356	219	232	294	1,497	849	3,447
<b>Percent Retained</b>	<b>54%</b>	<b>70%</b>	<b>61%</b>	<b>79%</b>	<b>80%</b>	<b>73%</b>	<b>72%</b>

### **Retention of First-Time Full-Time Degree-Seeking Undergraduates from Fall 2005 to Fall 2006**

**Fall 05 Federal Right-to-Know Cohort, Fall 06 Census Date Extract**

	<b>BHSU</b>	<b>DSU</b>	<b>NSU</b>	<b>SDSMT</b>	<b>SDSU</b>	<b>USD</b>	<b>System</b>
<b>New Degree Seeking in Fall 2005</b>	460	281	370	352	1,788	1,035	4,286
<b>Enrolled in Same University in Fall 2006</b>	251	185	216	263	1,382	737	3,034
<b>Percent Retained</b>	<b>55%</b>	<b>66%</b>	<b>58%</b>	<b>75%</b>	<b>77%</b>	<b>71%</b>	<b>71%</b>
<b>Enrolled in the System in Fall 2006</b>	272	203	232	281	1,448	769	3,205
<b>Percent Retained</b>	<b>59%</b>	<b>72%</b>	<b>63%</b>	<b>80%</b>	<b>81%</b>	<b>74%</b>	<b>75%</b>



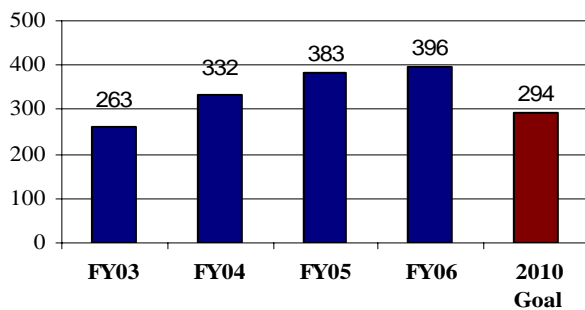
## Responses to Opportunity

1. A budget performance incentive program is in place that encourages institutions to increase the retention of students.
2. Better preparation of students through the taking of college prep or ACT core curriculum will enhance progression of students.
3. The South Dakota Opportunity Scholarship program will contribute to an improved graduation rate with its requirement for students to take a full academic course load.

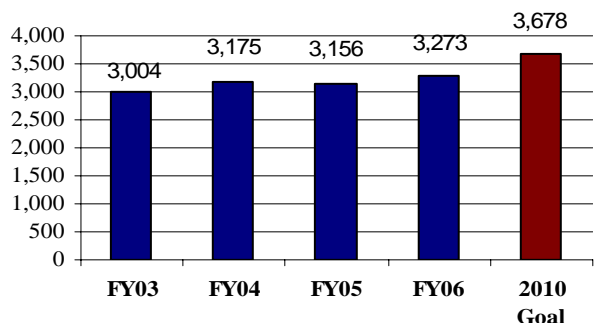
## Future Directions

1. Retention of undergraduate degree-seeking students will increase to 80 percent.
2. Graduation rates of entering undergraduate students will increase to 70 percent in 150 percent of time to degree.
3. The number of graduates from associate-degree programs will increase 10 percent by 2010.
4. The number of graduates from bachelor-degree programs will increase 20 percent by 2010.
5. The number of students completing graduate degrees in the science, technology, engineering, and mathematics fields will double.
6. The number of Ph.D. graduates will double by 2010.

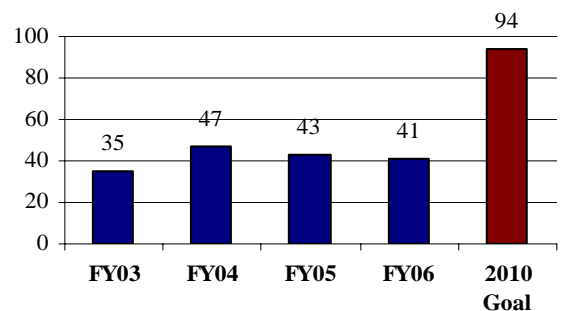
**Associate Degree Graduates**



**Bachelors Degree Graduates**



**Ph.D. Degree Graduates**



## *Opportunity: Competition for Talent*

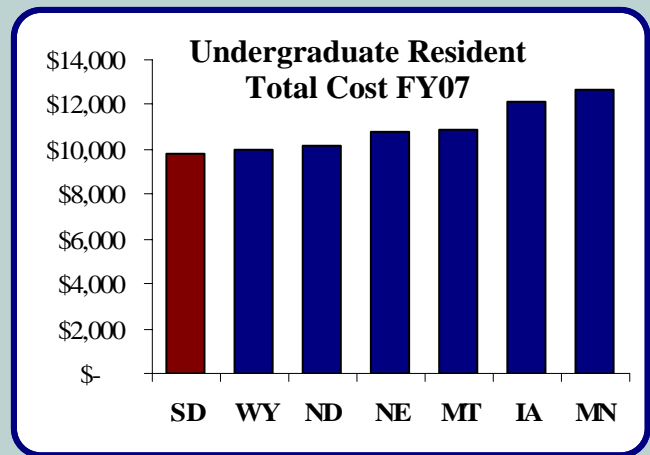
**Retaining youth in state for their postsecondary education and attracting non-residents to South Dakota will be essential in building a population to serve the knowledge-based economy of the future.**

### **Current Situation**

1. 2006 graduates of South Dakota high schools enrolled in a public university in fall 2006 were 32.7 percent of the 9,109 total graduates reported by the Department of Education.
2. 26.4 percent of the enrollment at public universities is non-resident students who migrated to South Dakota.
3. Nebraska's New Nebraskan Scholarships cover all or part of the differential between in-state and out-of-state tuition.
4. In the surrounding WICHE states—North Dakota, Wyoming, and Montana—South Dakota residents are charged 150 percent of the resident tuition rate, a reduction from the usual non-resident tuition.
5. Some of the smaller North Dakota institutions charge South Dakota residents less than 150 percent of the resident tuition rate (i.e. South Dakota residents pay 125 percent of the resident tuition rate at Dickinson State University).
6. Minnesota reciprocity agreement allows South Dakota residents to go to Minnesota public institutions at the resident rate.
7. The new Wyoming Hathaway Scholarship provides merit and need-based assistance up to \$3,200 a year for Wyoming students to attend the University of Wyoming. This is an incentive to students who traditionally have been attracted to South Dakota universities to stay at home in Wyoming.

### **Responses to Opportunity**

1. The South Dakota Opportunity Scholarship provides an incentive for students to select South Dakota institutions.
2. The Board of Regents has consciously kept total costs for attending its public universities among the lowest in the region.

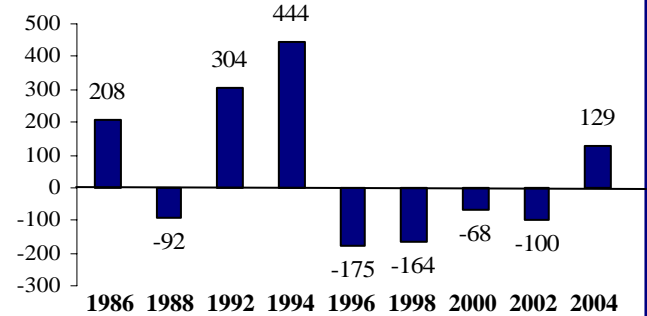


3. The Board of Regents has adopted a marginal-cost economic model to reduce the cost for non-resident students.
4. Each of the public universities has raised private resources to provide scholarships for students—SDSU Jackrabbit Guarantee, USD Promise, DSU Champion Scholarship, BHSU Academic Achievement Award, NSU Wolf Pact, and SDSMT Tech Challenge.

## Future Directions

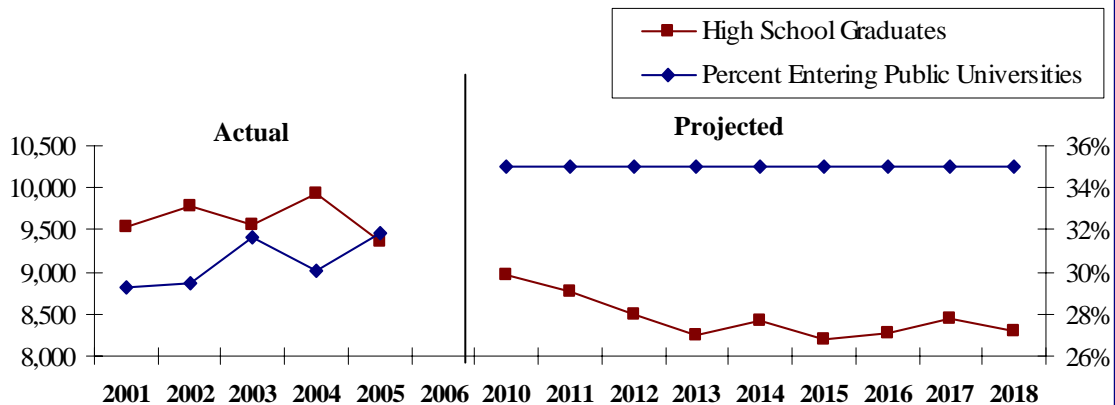
1. Strengthen the incentive to stay in state for college education by having a more competitive South Dakota Opportunity Scholarship program.
2. Maintain a consistent annual tuition and fee policy, unlike many other states where double-digit spikes are common.
3. Convert self-support to state-support tuition rates for students enrolled in programs other than on the six residential campuses.
4. Achieve 35 percent of high school graduates attending a public university.

### Net of Interstate Migration of First-Time Degree-Seeking Freshmen

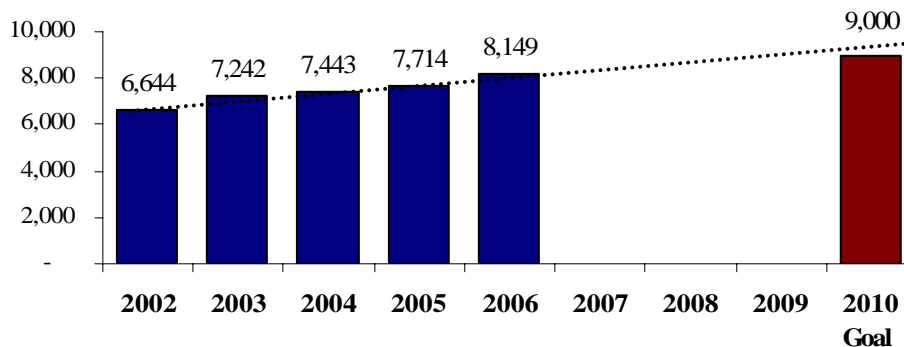


Note: Positive numbers show those who come to South Dakota from other states. The negative numbers show those who leave South Dakota for their education.

### Graduates of South Dakota High Schools Enrolled in a Public University Fall of Same Year—Actual and Projected Enrollments



### Non-Resident Enrollment History



## *Opportunity: Build a Research Culture and Embrace Development of the State's Economy*

An innovation-oriented economic sector is reliant upon having graduate and research programs and students to build and sustain a research industry.

### Current Situation

1. South Dakota ranks 49<sup>th</sup> in federal research and development expenditures.
2. South Dakota ranks 49<sup>th</sup> in university research and development.
3. South Dakota ranks 44<sup>th</sup> in number of patents issued.
4. South Dakota ranks 43<sup>rd</sup> in number of Ph.D. scientists and engineers.
5. Creation of five 2010 research centers:
  - **Center for Accelerated Applications at the Nanoscale** – SDSMT Department of Materials and Metallurgical Engineering, SDSU Department of Electrical Engineering
  - **Center for Infectious Disease Research and Vaccinology** – SDSU Department of Veterinary Science, USD School of Medicine
  - **Center for the Research and Development of Light-Activated Materials** – USD Department of Chemistry, SDSU Department of Chemistry, Avera Research Institute
  - **South Dakota Signal Transduction Center** – USD School of Medicine's Cardiovascular Research Institute
  - **Center for Bioprocessing Research and Development** — SDSMT Department of Chemical and Biological Engineering, SDSU Department of Biology/Microbiology

6. Funds for faculty seed grants have supported 20 faculty members in the development of research programs in 2006-2007.

### South Dakota NSF Funding—2005

	<u>Amount</u>	<u>Rank</u>
Number of Awards	42	49
Average Award	\$186,286	40
Per Science Graduate Student	\$11,678	31
Per Engineering Graduate Student	\$24,223	42
Total Funding	\$7,824,000	51

### South Dakota NIH Funding—2005

	<u>Amount</u>	<u>Rank</u>
Number of Awards	28	49
Average Award	\$698,860	4
Per Science Graduate Student	\$29,206	40
Per Engineering Graduate Student	\$60,582	45
Total Funding	\$19,568,074	49

### South Dakota Graduate Students

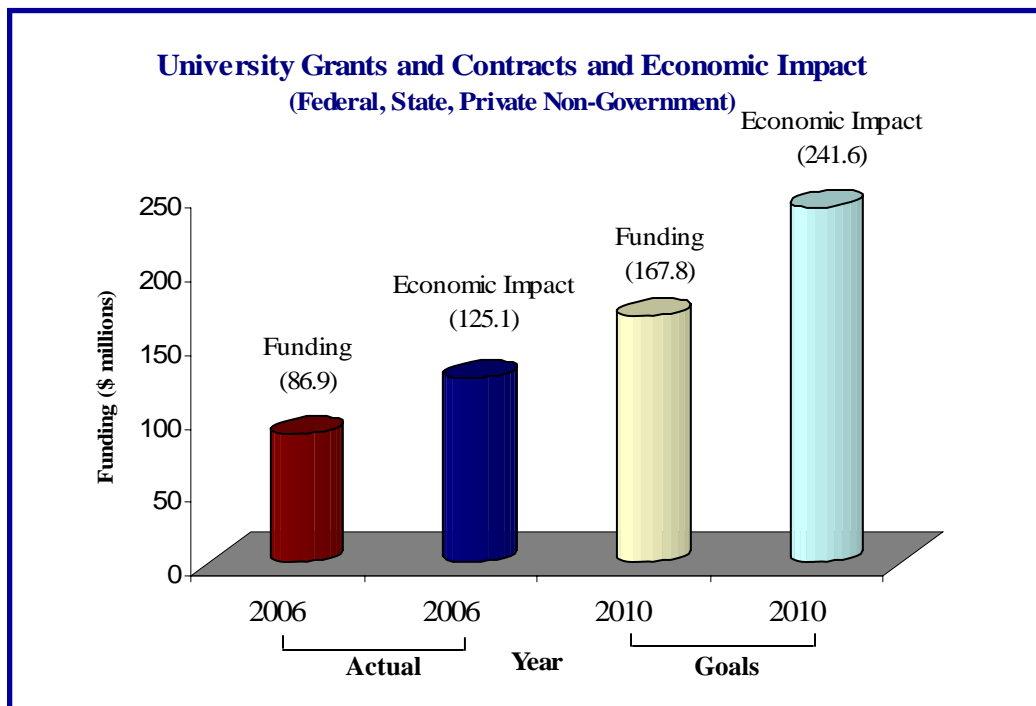
	<u>Number</u>	<u>Rank</u>
Total Science Students (2004)	670	49
Total Engineering Students (2004)	323	44
Number of Doctorate Recipients (2005)	81	47

## Responses to Opportunity

1. Invest in new 2010 research centers.
2. Invest in additional Ph.D. programs.
3. Develop research investment incentive program for universities.
4. Secure broadband access for South Dakota.

## Future Directions

1. South Dakota will have a nationally competitive research infrastructure and will have achieved Governor Rounds' goal of being 31<sup>st</sup> in per capita National Science Foundation funding.
2. South Dakota public universities will be active partners in the National Underground Science Lab at Homestake.
3. South Dakota public universities will double the number of Ph.D. programs by 2010.
4. South Dakota public universities will confer more than 100 Ph.D. degrees by 2020.
5. South Dakota public universities will double their number of students receiving graduate degrees.



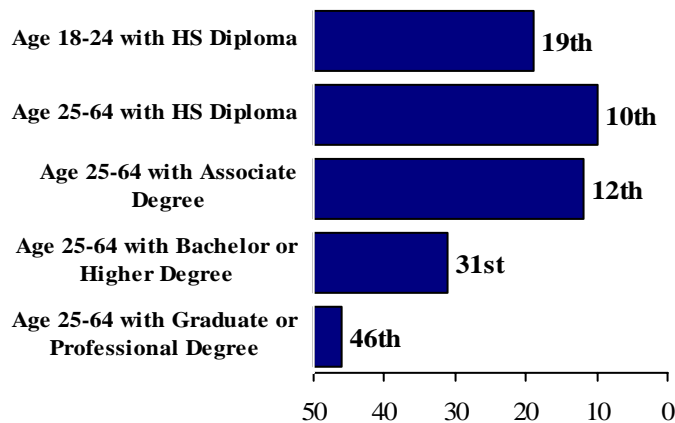
## Opportunity: Workforce Educational Attainment

Engaging the adult population in postsecondary education is vital to achieving a stable and prepared workforce.

### Current Situation

- 33.1 percent of the state's population over age 25 has an associate degree, compared to 33.8 percent nationally.
- 24.5 percent of the state's population over age 25 has a bachelor degree, compared to 26.5 percent nationally.

### Educational Attainment and Rank Among States—South Dakota, 2000



Source: U.S. Census Bureau, 2000 Census

- 6.5 percent of the state's population over age 25 has a graduate or professional degree, compared to 9.4 percent nationally.
- 3.7 percent of the adult workforce (25 to 49 years of age) is engaged in postsecondary education.

## Responses to Opportunity

- Extend access to underserved populations in Sioux Falls through the South Dakota Public Universities and Research Center (PURC).
- Extend access to populations in western South Dakota through the Higher Education Center-West River.
- Extend access to public higher education in central South Dakota through Capital University Center.
- Extend distance education access through the Electronic University Consortium.
- Increase the number of students who can articulate technical institute degrees.

## Future Directions

- Have 250 program-to-program articulation agreements between the technical institutes and the public universities.
- Increase the percentage of the workforce (25 to 49 years of age) engaged in postsecondary education to among the top states in the nation—5.1 percent.
- Increase the workforce in critical fields to meet the needs of the state's changing demographics, such as healthcare and replenishing the aging teacher education workforce.
- Increase the participation in higher education of minority populations, especially Native Americans, African Americans, and Hispanics.

### Satellite Sites in Sioux Falls, Pierre, and Rapid City Students Enrolled in at Least One Course, Fall Semesters 2004-2006

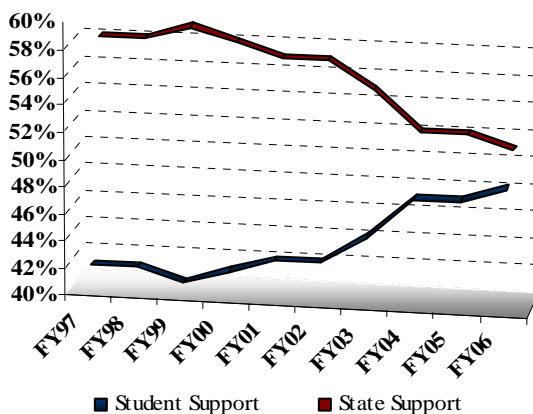
Fall	All Sioux Falls*	PURC Only*	Pierre	Rapid City	Ellsworth AFB
2004	2,034	1,848	168	773	945
2005	2,071	1,883	182	572	988
2006	2,119	1,928	182	675	917

## Opportunity: Effective Use of Resources

### Current Situation

1. South Dakota public universities are funded at a level that is 20 percent below comparable peer universities.
2. The public universities continue to use the “Reinvestment Through Efficiency” resources from budget cuts taken a decade ago to fund high-priority activities such as technology, curriculum redesign, economic development, K-12 linkages, and Centers of Academic Excellence.
3. The Regental system cut 114 positions at the value of 5 percent of the base budget to fund the start-up of the salary competitiveness initiative.
4. The Regental system has fully funded implementation of new student, finance, and human resource information systems without state appropriations, unlike initiatives under way in other states.
5. The current approach for funding student instruction requires the institutions to become more efficient since they only receive student tuition resources for new students, a result of freezing state appropriation contributions to the instructional formula in 1997. If the formula were used today, the institutions would have available to them \$5.2 million more from state appropriations.

**Funding Support**  
Student and State Share FY98-FY07



### Responses to Opportunity

1. The system-oriented student information system has been installed.
2. The system-oriented finance information system is being implemented.
3. The system-oriented human resources information system is being implemented.
4. Online payment plans are available.
5. Online billing and payments are fully functional.
6. The system course management system used by all six institutions is under review for updating and replacement.
7. The six universities have come together for a common approach to the delivery of distance education through the Electronic University Consortium.

### Future Directions

1. The Regental system will continue to find new approaches for effectively using resources through the use of electronic processes.
2. The Regental system will develop more Web-based delivery of instructional courses and programs.
3. A research support infrastructure will be shared by the institutions.
4. The public universities will alter the delivery of instruction in some courses to permit more student-paced, faculty-mentored approaches.
5. The universities will implement shared services in purchasing, payroll, and accounts payable functions.



## Opportunity: Student Success

**Documenting that students receive quality educational experiences is as important as the focus on the number of students who graduate from postsecondary institutions.**

### Current Situation

1. The number of South Dakota high school graduates entering the system with Advanced Placement (AP) credit increased 44 percent, from 172 in 2002 to 248 in 2005. Students entering with AP credit maintain a higher grade point average and are significantly more likely than other students to reach sophomore status at the end of their first year.
2. Most of the system's students pass the proficiency exam sub-tests the first time they take the test:
  - a. Science reasoning 99.7%
  - b. Mathematics 98.7%
  - c. Reading 96.0%
  - d. Writing skills 93.5%
3. Most of the system's students perform above national expectations (the norm is 50 percent) when they take the proficiency exam:
  - a. Science reasoning 68.0%
  - b. Mathematics 61.0%
  - c. Reading 58.0%
  - d. Writing skills 59.0%
4. 93 percent to 98 percent of the system's students show expected or larger gains between their ACT score and their proficiency exam sub-test scores:
  - a. Writing 93%
  - b. Mathematics 96%
  - c. Reading 93%
  - d. Science Reasoning 98%
5. Graduates of the dental hygiene, dietetics, pharmacy, and respiratory care programs passed licensure/certification examinations at rates exceeding the national pass rates.
6. The National Survey of Student Engagement (NSSE) asks first-year students and seniors to reflect on their college experience. Student responses

are organized into five key clusters of activities that research has shown to be associated with student satisfaction, persistence in college, and graduation. System raw scores in the five clusters are slightly below the national averages:

Indicators	System	National
Level of academic challenge	52.2	55.8
Active and collaborative learning	48.3	50.4
Student interactions with faculty members	40.4	41.3
Enriching educational experiences	37.0	39.9
Supportive campus environment	53.9	56.6

### Responses to Opportunity

1. Budget performance incentive funds have set an 8 percent improvement target for student retention.
2. The system is developing a comprehensive academic performance report that will address progress toward degree, national comparisons of proficiency, NSSE data, and performance on exit examinations.

### Future Directions

1. Double the number of South Dakota high school graduates entering the system with AP credit by collaborating with the Department of Education to train more South Dakota teachers to teach AP courses.
2. All system students will pass the proficiency examination the first time they take it.
3. 75 percent of system students will perform above national expectations on all sub-tests the first time they take the proficiency examination.
4. 96 percent of system students will show expected or larger gains between their ACT score and their proficiency exam's writing and reading sub-test scores.
5. Exceed NSSE national averages for "Student Interactions with Faculty Members" and "Level of Academic Challenge" as a system.
6. Graduates from programs with licensure/certification examinations will pass these exams at rates above the national pass rate.



## Opportunities Summary

As we examine the historical, current, and prospective condition of South Dakota public higher education, policy decisions are driven by two fundamental questions:

**First**, how will we graduate the number of students required for the workforce of the New Economy in South Dakota?

**Second**, what needs to happen within the public universities to build the research culture and infrastructure needed for a competitive research-oriented industry in South Dakota?

<b>The Problem:</b>	
Projected change in new SD high school graduates enrolled in public universities, 2006 to 2018	-268
<b>Response Strategies:</b>	
Increase high school graduates enrolled in BOR institutions to 35%	187
Improve total associate and bachelor retention from 77% to 80%	575
Double technical institute transfers	192
Growth in students ages 25 to 49 from 3.7% to 5.1% of population in age group	2,667
Growth in new non-resident students to reach a total of 9,000	213
<b>Total Additional Students</b>	<b>3,834</b>

<b>Requirements for Investments in Institutional Research Infrastructure</b>
<ul style="list-style-type: none"> <li>• Increase the number of graduate assistantships in science and engineering to create a critical mass of students in those disciplines.</li> </ul>
<ul style="list-style-type: none"> <li>• Increase the value of graduate assistantships in science and engineering to nationally competitive levels.</li> </ul>
<ul style="list-style-type: none"> <li>• Increase the number of undergraduate research fellows in science and engineering.</li> </ul>
<ul style="list-style-type: none"> <li>• Provide for the allocation of assigned research time for faculty in science and engineering.</li> </ul>
<ul style="list-style-type: none"> <li>• Provide research start-up packages for new faculty:             <ul style="list-style-type: none"> <li>* Provide support personnel</li> <li>* Release time for research</li> <li>* Labs</li> <li>* Equipment and instrumentation</li> <li>* Operating expenses</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• Invest in contemporary research equipment and instrumentation.</li> </ul>
<ul style="list-style-type: none"> <li>• Provide for the matching of grant funds.</li> </ul>
<ul style="list-style-type: none"> <li>• Establish research grant support offices (pre-award).</li> </ul>
<ul style="list-style-type: none"> <li>• Establish research grant administration offices (post award).</li> </ul>
<ul style="list-style-type: none"> <li>• Provide access to broadband Internet.</li> </ul>



## Missions of the Universities and Special Schools



### **Black Hills State University – Kay Schallenkamp, President**

Black Hills State University provides associate and baccalaureate degree programs in the liberal arts and sciences, education (SDCL 13-59-1), business, and technology. BHSU offers master's degree programs in education, business services, and science. The BHSU Center for Indian Studies (SDCL 13-59-2.1) provides opportunities to research and study the history, culture, and language of the Indians of North America and South Dakota. BHSU supports the Center of Excellence in Mathematics and Science Education.



### **Dakota State University – Douglas Knowlton, President**

Dakota State University provides associate and baccalaureate degree programs in business, computer science and information systems, education, math, and physical science. The education programs are intended to prepare elementary and secondary teachers with expertise in the use of technology in teaching and learning (SDCL 13-59-2.2). DSU also provides master's degree programs in educational technology and information systems and a doctoral degree in information systems. The Center of Excellence in Computer Information Systems is located at DSU.



### **Northern State University – Patrick Schloss, President**

Northern State University provides associate and baccalaureate degree programs in the liberal arts and sciences, education (SDCL 13-59-1), business and international business, and technology. NSU offers master's degree programs in education. Distance delivery technology is a core mission in all degree programs, especially all levels of teacher preparation. NSU is home to the Center for Statewide E-Learning and the Center of Excellence in International Business.



### **South Dakota School of Mines and Technology – Charles Ruch, President**

South Dakota School of Mines and Technology provides baccalaureate, master's, and doctoral degree programs in engineering and science (SDCL 13-60-1) and a bachelor's degree in interdisciplinary sciences. SDSMT faculty engage in competitive research in engineering and the sciences. The university maintains the Center of Excellence for Advanced Manufacturing and Production and provides students with opportunities to work in interdisciplinary teams on applied projects.



**South Dakota State University – David L. Chicoine, President**

South Dakota State University is the state’s land-grant university (SDCL 13-58-1). SDSU provides associate, baccalaureate, master’s, and doctoral degree programs in the liberal arts and sciences, agriculture, education, engineering, family and consumer sciences, and nursing. A professional degree program is offered in pharmacy (Pharm.D.). SDSU conducts competitive strategic research, scholarly and creative activities, and transfers knowledge to the citizens of South Dakota through the Cooperative Extension Service and other entities. The university supports the Polytechnic Center of Excellence and the Center of Excellence in Biostress. In 2001 the university was named the lead institution among five Sun Grant institutions across the country.



**The University of South Dakota – James W. Abbott, President**

The University of South Dakota is designated as the state’s liberal arts university (SDCL 13-57-1). The university provides associate and baccalaureate degree programs in the liberal arts and sciences, business, education, and fine arts. The university offers master’s, educational specialist, and doctoral degree programs in selected arts and sciences, business, education, and medical basic sciences. The university offers professional degree programs in law (J.D.) and medicine (M.D.). USD faculty members engage in competitive research and other scholarly and creative activities. The Centers of Excellence in Civic Leadership and in Disaster Mental Health are located at USD. The Sanford School of Medicine supports the Center of Excellence in Primary Care Ambulatory Medical Student Education.



**South Dakota School for the Blind and Visually Impaired – Marjorie Kaiser, Superintendent**

The South Dakota School for the Blind and Visually Impaired provides a full academic program, kindergarten through high school, for students on the Aberdeen campus. Outreach specialists provide consultation to parents and teachers of blind and visually impaired children throughout the state. Emphasis is given to adapting teaching materials and teaching methods to meet the needs of students with visual impairments. The curriculum blends academic coursework and the “expanded core curriculum,” which teaches practical skills to enable students to attain maximum independence. The expanded core curriculum includes orientation and mobility skills for independent travel, Braille, activities of daily living, low vision utilization, use of specialized equipment, social and recreational skills, and preparation for employment.



**South Dakota School for the Deaf – Maureen Schloss, Superintendent**

The South Dakota School for the Deaf is the statewide education resource for children who are deaf or hard of hearing. SDSD is accredited for regular and special education (K-12) by the state. The school provides a full educational program for students on campus and through outreach specialists who serve deaf and hard of hearing children throughout the state. Programs include direct services to students, parents, and professional service providers; educational evaluations; and consultative services for local school districts and cooperatives.

## Source Reference

- Page #**
- Page 1 **South Dakota's Higher Education Situation**
- \* population 25-64: U.S. Census Bureau
  - \* population 18-24: U.S. Census Bureau
  - \* need to increase graduates 20%: US Bureau of Labor Statistics
  - \* US from top to 8th: Organization for Economic Development and Cooperation
- Page 11 **Opportunity: High School Graduates Prepared for College**
- Current Situation**
- 1 105,861 pieces College Prep info mailed: Board of Regents
  - 2 ACT scores of SD high school graduates: *ACT High School Profile Report: The Graduating Class of 2006, South Dakota.*
  - 3 Average ACT Composite: *ACT High School Profile Report: The Graduating Class of 2006, South Dakota.*
  - 4 Average ACT Math: *ACT High School Profile Report: The Graduating Class of 2006, South Dakota.*
  - 5 Math courses & ACT Math scores: *ACT High School Profile Report: The Graduating Class of 2006, South Dakota.*  
Note: #6, #7 and #8 refer to 2005 graduates of South Dakota high schools who were enrolled for at least 12 hours in fall 2005.
- Page 11
- 6 69.2 percent of SD high school students .. prepared for all college-level work, up from 66.1 percent in 2000: Board of Regents, *2005 High School to College Transition Report, October 2006.*
  - 7 required remedial...math: Board of Regents, *2005 High School to College Transition Report, October 2006.*
  - 8 required remedial...English: Board of Regents, *2005 High School to College Transition Report, October 2006.*
  - 9 NSU E-learning Center: Northern State University
  - 10 472 high school students, 2005: Board of Regents, *Fact Book*
  - 10 2006 S.D. high school graduates: Department of Education
  - 10 312 high school students, 2001: Board of Regents, *Fact Book*
  - 11 10.5% of 2006 graduating class as SDOS: Board of Regents
  - 11 36% of 2006 SD grads scored 24 or above: *ACT High School Profile Report: The Graduating Class of 2006, South Dakota*
  - 11 Graph Enrollment History: SD Public High Schools & University System: Board of Regents & Department of Education
- Page 12
- Graph Percent of HS Graduates Who Sat for the ACT Exam and Took Core Curriculum: *ACT High School Profile Report: The Graduating Class of 2006, South Dakota.*
- Graph Projected Growth of SD Opportunity Scholarships: Board of Regents
- Page 13 **Opportunity: Retention and Graduation University Students**
- Current Situation**
- 1 48%...150% of degree time: Board of Regents
  - 2 72%...one year later: Board of Regents
  - 3 ACT and retention: Board of Regents
- Table Fall 2005 New Degree-Seeking Undergraduate Students, Enrollment in Fall 2006: Board of Regents
- Table Retention of First-Time Full-Time Degree-Seeking Undergraduates from Fall 2005 to Fall 2006: Board of Regents
- Page 14 **Future Directions**
- 1 Retention..80%: Board of Regents
- Graph Associate Degree Graduates: Board of Regents
- Graph Bachelor Degree Graduates: Board of Regents
- Graph Ph.D. Degree Graduates: Board of Regents
- Page 15 **Opportunity: Competition for Talent**
- Current Situation**
- 1 2006 grads...32.7%: Board of Regents
  - 2 26.4% ...non-resident: Board of Regents, *Fact Book FY07*
  - 4 WICHE states, 150%: Western Interstate Commission for Higher Education
  - 5 North Dakota, 125%: Dickinson State University web site.
  - 7 Wyoming Hathaway: <http://www.uwyo.edu/hathaway/>
- Responses to Opportunity**
- Page 15 Graph Undergraduate Resident Total Cost FY07: Board of Regents, *Student Costs at Public Institutions Academic Year 2006-2007.*
- Future Directions**
- Page 16 Graph History of Interstate Migration: *Postsecondary Opportunity*
- Graph Graduates of South Dakota High Schools Enrolled in a Public University Fall of Same Year--Actual and Projected Enrollments: Board of Regents (university enrollments), Department of Education (high school graduates), Western Interstate Commission for Higher Education (projected graduates)
- Graph Non-Resident Enrollment History: Board of Regents



Page 17 **Opportunity: Build a Research Culture and Embrace Development of the State's Economy**

**Current Situation**

- 1 49th in federal R&D: Corporation for Enterprise Development
- 2 49th in university R&D: Corporation for Enterprise Development
- 3 44th in patents issued: 2004/2005 Economic Vision 2010 Report Card
- 4 43rd in Ph.D. scientists and engineers: Corporation for Enterprise Development
- 5 2010 Research Centers: Board of Regents
- 6 20 seed grants in 2006-2007: Board of Regents

Table South Dakota NSF Funding--2005: Great Plains Network

Table South Dakota NIH Funding--2005: Great Plains Network

Table Graduate Students: Great Plains Network

Doctorate Recipients: NSF

Page 18 Graph University Grants and Contracts and Economic Impact: Board of Regents

Page 19 **Opportunity: Workforce Educational Attainment**

**Current Situation**

- 1 33.1% associate degree, 33.8% US: NCHEMS
- 2 24.5% bachelor's degree, 26.5% US: NCHEMS
- Graph Educational Attainment and Rank Among States--South Dakota, 2000: NCHEMS
- 3 6.5% grad/prof degree, 9.4% US: NCHEMS
- 4 3.7% of 25-54 year olds: *Measuring Up 2006: The State Report Card on Higher Education, South Dakota.*

**Future Directions**

- 2 25-54 engaged...top states = 5.1%: *Measuring Up 2006: The State Report Card on Higher Education, South Dakota.*

**Opportunity: Effective Use of Resources**

**Current Situation**

- 1 universities funded 20% below peers: Board of Regents & Western Interstate Commission for Higher Education

Table Satellite Sites in Sioux Falls....: Board of Regents

Page 21 **Opportunity: Student Success**

**Current Situation**

- 1 SD high school graduates entering with AP: Board of Regents, *2005 High School to College Transition Report, October 2006.*
- 2 Students pass proficiency exam sub-tests: Board of Regents, *College Assessment of Academic Proficiency Report, December 2006.*
- 3 Students perform above national expectations: Board of Regents, *College Assessment of Academic Proficiency Report, December 2006.*
- 4 Gains between ACT and proficiency exam sub-score: Board of Regents, *College Assessment of Academic Proficiency Report, December 2006.*
- 21 5 Licensure & certification pass rates: Board of Regents, *Fact Book.*
- 6 NSSE raw scores: Board of Regents

Page 22 **Opportunities Summary**

**Problem & Response Strategies**

- Table change in HS graduates: DOE (2006) & WICHE (2018)
- increase high school grads enrolled: Board of Regents
- improve retention: Board of Regents
- double technical institute transfers: Board of Regents
- growth in students 25 to 49: U.S. Census Bureau (2020 projection)
- new non-resident undergraduates to reach 9,000: Board of Regents



**South Dakota Board of Regents — 2006**

Front row from left: Executive Director Robert T. Tad Perry; Vice President Randall K. Morris; James O. Hansen; Carole Pagonas, Kathryn Johnson, President Harvey C. Jewett; Terry Baloun. Back row from left: Secretary Dean Krogman; Tonnis H. Venhuizen; Richard G. Belatti.