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We have completed an audit of the University and Community College System of Nevada on the validity and reliability of enrollment data. This report represents one component of the audit required by Chapter 442, Statutes of Nevada, 2003 (A.B. 148). The purpose of legislative audits is to improve state government by providing the Legislature, state officials, and Nevada citizens with independent and reliable information about the operations of state agencies, programs, activities, and functions. The results of our audit, including findings, conclusions, recommendations, and the University and Community College System of Nevada's response, are presented in this report.

We wish to express our appreciation to the management and staff of the University and Community College System of Nevada for their assistance during this audit.

Respectfully presented,

A handwritten signature in black ink, appearing to read "Paul V. Townsend".

Paul V. Townsend, CPA
Legislative Auditor

August 31, 2004
Carson City, Nevada

STATE OF NEVADA
UNIVERSITY AND COMMUNITY COLLEGE SYSTEM OF NEVADA
VALIDITY AND RELIABILITY OF ENROLLMENT DATA

AUDIT REPORT

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EXECUTIVE SUMMARY
UNIVERSITY AND COMMUNITY COLLEGE
SYSTEM OF NEVADA
VALIDITY AND RELIABILITY OF ENROLLMENT DATA

Background

The Nevada Constitution provides for a state university to be controlled by a Board of Regents. The first institution was established in 1874. In 1969, the Legislature established the University of Nevada System with campuses in Reno and Las Vegas. In 1993, the name was changed to the University and Community College System of Nevada (UCCSN). An elected 13 member Board of Regents governs the UCCSN which includes the Chancellor's Office (System Administration), and 11 institutions and professional schools.

The funding of higher education is based upon formulas that use student full-time equivalents (FTE) as their basis. These formulas consider, for each course, the number of students and credit hours. FTE enrollment increased from 44,199 in fiscal year 1999 to 54,037 in fiscal year 2003. In fiscal year 2003, UCCSN reported state-supported expenditures of approximately \$527 million.

Purpose

The purpose of this audit was to determine the validity and reliability of enrollment data. Our audit included an examination of enrollment data at the University and Community College System of Nevada for the fall 2003 semester. Detailed testing occurred at the University of Nevada, Reno (UNR), University of Nevada, Las Vegas (UNLV), Community College of Southern Nevada (CCSN), and Truckee Meadows Community College (TMCC).

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Results in Brief

Before a budget for the University and Community College System of Nevada can be created, colleges and universities must make a count of all students. This count, called the student Full-Time Equivalent (FTE), is the driver for a large portion of the System's state-supported budget. As a result, an accurate count of students is critical.

We found the count of student FTE to be valid and reliable at the institutions reviewed. However, improvements can be made in the process to provide greater consistency throughout UCCSN and reduce the risk of inaccuracies. These improvements can begin by directing institutions to create formal written procedures and review processes when calculating FTE numbers. In addition, further improvements can be made by clarifying policies regarding which courses can be included in the official FTE count. System Administration policy dictates that summer courses and those paid from non state-supported accounts should not be included in the FTE count. However, some courses found during the audit did not meet this standard. Furthermore, security over the database that houses electronic enrollment information needs strengthening.

Principal Findings

- Student FTE counts begin with each institution downloading enrollment data from their mainframe database and extracting only those courses that will be used to generate the official count. Each of the selected institutions has a different process for downloading and compiling this data that is reported to System Administration. Standard written procedures have not been created to ensure the integrity of the student FTE calculation process. This increases the potential for errors to be introduced into the process. (page 12)

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- One of the difficulties encountered when calculating student FTE figures is the elimination of courses that do not meet the definition of state supported. This is because each institution has thousands of courses every semester to sort through. One of the institutions we reviewed, CCSN, has overcome this challenge using a method to identify each course as state-supported in the Student Information System (SIS) database. This has allowed them to efficiently identify which courses should be included in the FTE count. However, the other three institutions have a more complex method to identify these courses. By having a common method, manual processes are reduced and reliability of the information increases. (page 13)
- System Administration policy states that any course taught 51% during a summer semester cannot be included in the FTE count. However, 15 courses that occurred during the summer 2003 semester or between summer and fall semesters were included in the official fall 2003 student FTE count. These courses accounted for 43 FTE's. To ensure consistency, System Administration should provide additional guidance to institutions and direct them to periodically review courses for those occurring during summer semesters. (page 14)
- To be included in student FTE counts, all normal costs and revenues of a course should be included in an institution's state-supported accounts. However, for 16 courses reviewed, instructors were paid from non state-supported accounts, and yet were included in the fall 2003 student FTE count. These 16 courses accounted for 26 student FTE's. This has resulted from confusion at the universities and community colleges as to whether some courses should be included in the FTE count or not. Additional guidance by System Administration will help to clarify these matters and provide greater consistency. (page 15)
- At three of the selected institutions reviewed, we found a small number of users with inappropriate

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update access to enrollment data. UNR was the only institution whose users all had the appropriate level of access. For the three where exceptions occurred, the individuals either no longer worked for the institution or changed job responsibilities and no longer required this level of access to SIS. This situation increases the possibility that unauthorized changes could be made to SIS data thereby reducing its reliability. Periodically reviewing the security list will reduce the risk of unauthorized access to enrollment data. (page 17)

Recommendations

This audit report contains five recommendations to improve controls over the enrollment reporting process. These recommendations will help strengthen policy over the calculation of student FTE, and provide a common method for using SIS to efficiently designate which courses should be included in the official FTE count. In addition, they will help provide better guidance on which courses should be included in the official student FTE count. Finally, the recommendations help ensure stronger security over access to SIS. (page 25).

Agency Response

This agency, in its response to our report, accepted all five recommendations. (page 24)

Introduction

Background

The Nevada Constitution provides for a state university to be controlled by a Board of Regents. The first institution was established in 1874. In 1969, the Legislature established the University of Nevada System, with campuses in Reno and Las Vegas. In 1993, the name was changed to the University and Community College System of Nevada (UCCSN). The UCCSN master plan for higher education is composed of six primary objectives:

- A prosperous economy – Achieved by providing an educated and trained workforce.
- Quality education – Achieved by critical assessment of education programs and outcomes.
- Opportunity for all – Achieved by increasing the number of students and other Nevadans that seek higher education.
- Accessible education – Achieved by providing flexible and innovative delivery of courses that meet the needs of working adults and under-represented groups.
- P-16 education – Achieved by having seamless articulation through all levels of education.
- Building quality of life in Nevada – Achieved by enriching the quality of life for Nevadans through the arts, humanities, research, and educated alumni.

An elected 13 member Board of Regents governs UCCSN, which includes the Chancellor's Office (System Administration), and 11 institutions and professional schools. The entities include the University of Nevada, Reno (UNR); University of Nevada, Las Vegas (UNLV); Nevada State College (NSC); Community College of Southern Nevada (CCSN); Truckee Meadows Community College (TMCC); Western Nevada Community College (WNCC); Great Basin College (GBC); UNR School of Medicine; UNLV Law School; UNLV Dental School; and Desert Research Institute (DRI).

The Board appoints a Chancellor and the presidents of the eight institutions. The Chancellor serves as the Chief Executive Officer of the System in accordance with Board policy. The presidents, along with the Chancellor, constitute the officers of the System and serve at the pleasure of the Board.

Student Full-Time Equivalents

The state funding of higher education is based upon formulas that use student full-time equivalents (FTE) as their basis. A student full-time equivalent is based upon the number of course credits taken over a semester. For example, 15 credit hours of undergraduate courses equal one full-time equivalent student for a semester. The enrollment formulas use a series of calculations based upon FTE's to generate a dollar figure representing funds needed to finance faculty, classified employees, student wages, operating expenses, and equipment. The total FTE counts are used by the institutions to support requests for state funding.

From fiscal years 1999 through 2003, enrollments increased by 22.3%, from 44,199 to 54,037. Exhibit 1 shows student FTE's for fiscal years 1999 through 2003.

Exhibit 1

**UCCSN Annualized Student FTE's
Fiscal Years 1999 – 2003**

Campus	1999	2000	2001⁽¹⁾	2002	2003	% Change 1999-2003
UNR	9,277	9,581	9,598	10,449	11,295	21.8%
UNLV	14,630	15,055	14,659	16,046	17,267	18.0%
CCSN	12,597	14,222	14,315	15,208	16,647	32.2%
TMCC	4,516	4,654	4,766	4,898	5,259	16.5%
WNCC	2,012	2,061	2,060	2,149	2,160	7.4%
GBC	1,167	1,236	1,321	1,203	1,263	8.2%
NSC	–	–	–	–	146	–
Totals	44,199	46,809	46,719	49,953	54,037	22.3%
Annual % Change	–	5.9%	-.2%	6.9%	8.2%	–

(1) In Fall 2001, the method for calculating FTE was changed based upon the report of the *Committee to Study the Funding of Higher Education*. The new method affected the graduate level FTE. Therefore, FTE at UNR and UNLV in Fall 2001 and later will not be compatible with earlier years.

Note: UNLV Law School, UNR Medical School, and UNLV Dental School enrollments are not included in FTE because they are not supported through the state's regular funding formulas.

Source: UCCSN System Administration.

Prior to the 2001 fall semester, enrollments were based on student FTE's which counted one student FTE for each 15 semester hours for undergraduates and 8

semester hours for graduate students. Pursuant to the recommendations of the Committee to Study the Funding of Higher Education in 2001, the calculation of student FTE's for graduate students was changed. Based on the revision, 12 student semester hours in masters courses and 9 student semester hours in doctoral courses each equal one FTE.

Taxonomy (Course Classification)

Funding levels for institutions of higher education are determined on two broad factors: (1) the projected number of student full-time equivalents each institution will educate, and (2) the required number of instructional faculty and support staff necessary to support the education of the projected enrollments. UCCSN developed a funding formula in 1986 based on student/faculty ratios for different enrollment classifications such as engineering, nursing, and regular enrollment. Over time, each institution modified its taxonomy which were similar in nature but not standardized across the System. As a result, similar courses were not always classified the same between institutions. Due to enrollment growth in UCCSN and the lack of standardization in various taxonomies, the old funding formula became outdated.

During the 1999 Legislative Session, Senate Bill 443 was enacted creating the Committee to Study the Funding of Higher Education (Committee). The bill directed the Committee to perform a study comparing the existing higher education funding formula to those employed by other states and to develop recommendations for changes to the current methodology. On August 1, 2001 the chairmen of the Senate Committee on Finance and the Assembly Committee on Ways and Means issued a Letter of Intent stating that a new taxonomy, consistent between the institutions, was needed for the 2003 budget request. Subsequently, the Interim Finance Committee and Subcommittee on Higher Education further advised that the revised taxonomy should be completed on a cost-neutral basis based upon the current funding levels. Cost-neutral refers to a taxonomy that does not result in additional state funding based on the revised classification of courses.

The Committee's findings included a recommendation to adopt a standardized matrix for course classification to arrive at the required funding. Driven by these findings, a new taxonomy was completed but was not utilized for the 2003-2005 biennial

budget request because it was not cost-neutral. It would have resulted in increased funding. A second Letter of Intent was issued on September 5, 2003 requesting a cost-neutral taxonomy be developed and used for the 2005-2007 biennial budget request. A revised taxonomy has been considered by the Board of Regents. System Administration has indicated the revised taxonomy is cost-neutral and expects to use it for the 2005-2007 biennial budget request.

Revenues and Expenditures

The UCCSN reported state-supported revenues of more than \$526 million for fiscal year 2003. Exhibit 2 shows the revenues by source.

Exhibit 2

**UCCSN
Actual Revenues
Fiscal Year 2003**

Revenue Source	Revenue Amount
Appropriations	\$ 357,772,516
Reversions	(919,953)
Other Government Funds ⁽¹⁾	7,832,293
Student Fees	114,669,681
Estate Tax	40,997,312
Other Revenue ⁽²⁾	6,270,650
Total Revenue	\$ 526,622,499

(1) Other Government Funds include federal and county funds.

(2) Other Revenue includes operating capital investment funds, discretionary funds, and miscellaneous revenue.

Note: Totals do not include institution transfers.

Source: 2002-03 UCCSN State Operating Budget, Budget to Actual Comparison Reports.

Between fiscal years 1999 and 2003, actual expenditures increased 32.5% from \$397.4 million to \$526.6 million. Exhibit 3 details the state-supported expenditures from fiscal years 1999 through 2003.

Exhibit 3

UCCSN Operating Budget Fiscal Years 1999 – 2003

Budget Area	1999	2000	2001	2002	2003
System Administration	2,488,375	2,907,219	2,955,390	3,230,177	3,287,928
UNR	98,381,530	102,028,422	107,310,085	117,931,498	120,439,814
UNLV	116,442,446	122,567,558	126,962,721	143,809,512	150,502,714
CCSN	53,479,421	61,387,656	65,717,240	73,894,013	80,175,620
TMCC	23,988,104	26,204,101	27,835,270	31,436,454	32,849,114
WNCC	13,291,359	14,484,131	15,161,096	16,299,337	16,891,866
GBC	8,144,640	9,611,457	10,350,775	11,898,340	12,296,270
DRI	3,146,965	3,558,783	3,544,345	5,396,089	5,170,624
NSC	–	–	–	–	3,830,794
Other ⁽¹⁾	78,033,995	88,231,882	92,028,151	95,846,759	101,177,755
Totals	397,396,835	430,981,209	451,865,073	499,742,179	526,622,499
Annual % Change		8.5%	4.8%	10.6%	5.4%

- (1) Includes UCCSN Special Projects, System Computing Services, University Press, Intercollegiate Athletics, Medical School, Dental School, Law School, Statewide Programs, Agricultural Experiment Station, Cooperative Extension Service, Salary Adjustment Account, Health Laboratory and Research, Radiation Safety Program, Business Centers, and National Direct Student Loans.

Source: UCCSN State Operating Budget, Budget to Actual Comparison Reports.

Valid and Reliable Enrollment Data Necessary

Enrollment data is the major driver for UCCSN's state-supported budget. Specifically, the enrollment data is used to calculate the student FTE count which is used as the basis for the budget process. As such, UCCSN's budget considered by the State Legislature is dependent on valid and reliable enrollment data.

Valid means the information is relevant, meaningful, and logically correct. Reliable means the information and the underlying data are complete and accurate. To ensure information is valid and reliable, effective control systems must be in place. These systems should provide well documented procedures for preparing complete and accurate information.

Scope and Objective

This audit was required by Chapter 442, Statutes of Nevada, 2003 (A.B. 148) and was conducted pursuant to the provisions of NRS 218.737 to 218.893. The Legislative Auditor conducts audits as part of the Legislature's oversight responsibility for public programs. The purpose of legislative audits is to improve state government

by providing the Legislature, state officials, and Nevada citizens with independent and reliable information about the operations of state agencies, programs, activities, and functions.

This audit included an examination of enrollment data at the University and Community College System of Nevada for the fall 2003 semester. Detailed testing occurred at the University of Nevada, Reno (UNR), University of Nevada, Las Vegas (UNLV), Community College of Southern Nevada (CCSN), and Truckee Meadows Community College (TMCC). The objective of our audit was to determine the validity and reliability of enrollment data.

Findings and Recommendations

We found the count of student FTE to be valid and reliable at the institutions reviewed. However, improvements can be made in the process to provide greater consistency throughout UCCSN and reduce the risk of inaccuracies. These improvements include the need for formal written procedures and review processes when calculating FTE numbers. In addition, a common system-wide method for identifying state-supported courses in the Student Information System (SIS) database would reduce the risk of incorrectly calculating FTE's.

Student FTE Counts Reliable

Our review of the student FTE count for the fall 2003 semester found the calculations to be reliable. To verify that the information reported to System Administration was reliable, we duplicated the reported student FTE counts for each of the selected institutions by obtaining original enrollment data from SIS and compiling the count. We verified that information contained in each selected institution's SIS database agreed with information sent to System Administration for the official FTE count. While this information was accurate, the review process at the institutions could be improved.

Student FTE Calculation Process

The Student Information System, or SIS, is the primary repository of all information pertaining to a student's academic and financial activity while attending school. SIS tracks and reports on students, faculty, course, class, and financial information. While each institution in UCCSN uses SIS, each has customized it for their individual ways of conducting business.

Each institution's data is kept in a separate database that is not accessible by the others. A computer file, commonly referred to as a STAT file, is used for student enrollment information. The STAT file for each institution is produced from SIS. This information is used as the basis for calculating student FTE. Using the STAT file, staff

at each institution then begin the process of eliminating courses that should not be included in the official FTE count. These would typically be courses that do not count toward a degree or award, have no credit hours, or are paid from non state-supported monies. Once the appropriate courses have been identified, the information is next calculated based on level of instruction such as undergraduate, graduate, and doctoral. The final result is a count of student FTE's for one semester. This information is then delivered to System Administration to be summarized for all institutions and used to calculate the state-supported budget.

Consistent Controls Needed at Institutions

Our review found a lack of written procedures at three of the selected institutions to guide staff in calculating student FTE's. UNR did have a procedure but it is not current. In addition, there was no evidence of management review of the numbers before being sent to System Administration.

Each institution utilizes a slightly different process for calculating and reporting student FTE. Once SIS data has been downloaded from a mainframe to a desktop computer, the data is processed by various software programs, depending on the institution. These programs include Microsoft Access, Excel, and a statistical package. Some institutions use a more automated approach by allowing the software programs to perform much of the calculation. Other institutions use a combination of software and manual methods for their calculations.

Because each institution uses different methods for calculating student FTE, strong controls are needed to ensure the information will continue to be reliable. However, the process for calculating FTE's at institutions is not well documented and has no evidence of internal management review. This, coupled with different methods for downloading and analyzing enrollment data, increases the risk that data will not be accurate in the future.

Well documented controls need to be in place to ensure that the data retains its integrity. Each institution should have clear procedures on how FTE calculations should occur. In addition, institution management should perform documented reviews of the information before being sent to System Administration.

State-Supported Course Identifier

An additional method exists to allow institutions to more accurately and easily calculate student FTE from SIS. Each institution offers courses that are not eligible for state support and thus are not included in their FTE count. Since all institutions track these courses and students in SIS, these credit hours must be identified and then eliminated from the official student FTE count. The Community College of Southern Nevada (CCSN) addresses the issue by using a unique code from data that already exists in SIS. When CCSN extracts data from SIS to create their STAT file, the only courses that are downloaded are state-supported courses. This reduces the risk of including the wrong courses in the count.

In contrast, the other institutions rely on a more complex method. For these institutions, the information extracted from SIS contains both state-supported and non state-supported courses. As a result, once SIS information is downloaded at these institutions, more work must be done to eliminate non state-supported courses from the STAT file before student FTE can be calculated.

In some cases departments offering the courses must notify enrollment staff that a particular course is not state supported. The possibility exists that a miscoded class or failed notification by a department would lead to ineligible classes being included in the official FTE count. A common, system-wide method of identifying state-supported courses in SIS would simplify the elimination of ineligible courses from the official FTE count. This would also reduce the risk of improperly counting courses.

Recommendations

1. Direct institutions to create formal written procedures and a documented review process over calculation of student FTE.
2. Create a common system-wide method for identifying state-supported courses in SIS.

Guidance on Which Courses to Include in FTE Count Should Be Clarified

We found the calculation of student FTE to be valid for the fall 2003 semester. Generally, courses that should be excluded from the FTE count were handled

appropriately. However, some courses need further clarification to determine if they should be included or not. Valid and reliable FTE counts affect the amount of State money UCCSN receives. Therefore, effective policies and procedures governing the calculations at System Administration and each institution are essential.

System Administration has developed policies to identify which courses can be included for the FTE count and which ones should be excluded. The policies are as follows:

- The course must be credit bearing.
- All normal class revenues and costs are included in the state-supported operating budget.
- Course can be used to fulfill the requirements of a degree, certificate, or other formal award.
- Instruction does not occur in the normally scheduled summer term.

Summer Courses

System Administration policy prohibits including any course in the FTE count in which 51% of the class time occurs during the summer term as defined by the institution's calendar. However, some courses were included in the fall 2003 FTE count that occurred during the summer.

We reviewed all courses included in the fall 2003 semester FTE count that began before the official fall start date as published in the catalog for each of the institutions. Of these courses, 11 occurred 51% or more during the summer term. These 11 courses accounted for a total of 32 student FTE's.

While the policy is clear on those courses that occur during the summer, the policy does not specifically address courses that occur during the period between summer and another semester. These courses are typically of a short duration. For example, our audit found four courses that occurred mostly between summer and fall 2003 semesters and were included in the fall 2003 FTE count. These four courses accounted for 11 student FTE's.

Because these courses did not occur in the fall semester, it is unclear if they should have been included in the FTE count. Providing additional guidance will help

institutions determine which courses should be included in the FTE count. Greater adherence to System Administration policy will result by having institutions periodically review their courses.

Non State-Supported Courses

Additional guidance can be provided to instruct institutions in which courses to include in the calculation of student FTE. System Administration policy states that for a course to be included in the FTE count, all normal class revenues and costs are to be included in the state-supported budget. To accomplish this, each institution has an account into which state funds are deposited. These accounts are used to fund many of the institutions' courses. For example, if the normal costs of a course are paid from an institution's state-supported account, then that course should be included in the student FTE count. Guidelines given to the institutions in 1999 state:

The State supports higher education, in part, by linking some funding directly to FTE enrollment...as a general guideline, the major indicator of institutional cost is faculty workload; the work of the faculty in delivering instruction is ordinarily a necessary condition for including instruction in state-supported FTE.

We found courses whose instructors were paid from non state-supported accounts and yet were included in the fall 2003 student FTE count. From a database of courses that were included in the count, we reviewed a sample to determine the source of payment for the instructors. Instructor costs were reviewed, considering them to be a normal cost of a course. For those instructors that were paid from a state-supported account, the FTE's were appropriately counted. However, some courses in the sample were taught by instructors that were paid from non state-supported accounts.

Out of the approximately 13,500 courses offered by the four selected institutions during the fall 2003 semester, we reviewed 226 courses. Of those courses we reviewed, 16 had instructors that were paid from non state-supported accounts. Thirteen of these were paid from the institutions' non state-supported unrestricted accounts. These included courses such as music, golf, and Spanish studies abroad. Two were paid from Department of Education grants. Additionally, one instructor was paid through an apprenticeship contract with a union. These 16 courses accounted for 26 FTE's. In comparison, the total FTE count for all courses in our sample was 917.

Apprenticeship Course

In March 2001, the Office of Attorney General issued a report on financial management practices of CCSN. The report called into question the inclusion of union apprenticeship courses in the official FTE count. The report questioned the inclusion due to limited availability of these courses to the general student population at CCSN and the lack of the college's resources used for the courses. For example, CCSN did not use their own classrooms or instructors for the courses. In response to the report, System Administration stated they would review their policies and implement changes. However, there are no official guidelines to assist the institutions in determining the inclusion or exclusion of these types of courses. From a sample of courses selected, our current review found one apprenticeship contract course that was included in CCSN's fall 2003 student FTE count.

FTE Count Policy

Because student FTE is the main driver for UCCSN's state-supported budget, each course included in the student count increases their budget. Care should be taken to ensure that only those courses whose normal costs and revenues are part of the state-supported budget are included in the official student FTE count.

Regarding the issue of non state-supported courses, there was not a consistent view between System Administration and the institutions' business officers concerning the definition of normal costs. To provide greater consistency the policy should be enhanced to clearly define which courses should be included in the student FTE count. Specifically, the policy should clearly define which costs and revenues of a class are normal.

While the wording of the policy can be improved, the level of the policy also needs to be greater. Currently, the policy is in the form of a memo issued from System Administration. However, because enrollment reporting is key to UCCSN's budget, more formal avenues exist for such a policy. These include a Chancellor's Memorandum or inclusion in the Board of Regents' Handbook.

Recommendations

3. Direct institutions to periodically review courses to ensure only appropriate ones are included in the official student FTE count.

4. Clarify System Administration policies to specifically address summer courses and non state-supported courses, including the definition of normal costs.

Security Over Student Information System Needs Improvement

The Student Information System (SIS) contains information on students and is the core of enrollment data. As such, its safekeeping is vital. Only selected individuals should have the ability to update information in the system. Update access includes editing, modifying, or deleting information.

Accessing SIS is a two step process. First, a user must logon to the UCCSN mainframe. Second, the user must logon to the SIS program using an ID and password. Once access has been granted, users are limited in what they can accomplish by the security system built into SIS. Certain individuals, such as those in an institution's Registrar's Office need a very high level of access to help students through the enrollment process. Others only need access to review data.

At three institutions we found a small number of users that were listed in SIS with the ability to update information but should not have had this level of access. We found no users with inappropriate access at UNR. Users with inappropriate access included terminated employees and current employees who had changed job functions.

Although these users were listed in SIS with update access, the mainframe provides an extra level of security. It has a security system that revokes user access after a period of inactivity. Some of the unauthorized users we identified did not have current mainframe access and thus no access to SIS. This mainframe security somewhat reduces the risk of inappropriate update access. However, despite the extra security the mainframe provides, SIS security settings should not be ignored. Every level of security should be given the same attention.

Access controls should provide reasonable assurance that computer resources are protected against unauthorized modification, disclosure, loss, or impairment. Limiting access ensures that users only have the access needed to perform their duties. Each institution should review the SIS security system to ensure that only current and authorized employees are allowed to access and update data in SIS.

Recommendation

5. Direct institutions to review their security reports, ensuring only appropriate users are listed with SIS update access.

Appendices

Appendix A **Audit Methodology**

To gain an understanding of the enrollment and student full time equivalent (FTE) calculation process, we conducted interviews with personnel responsible for institutional analysis, budgeting, enrollment, and information systems at the institutions and at System Administration. We documented how information is entered into the Student Information System (SIS), validated, and used in the budgeting process.

We reviewed documentation from the various institutions and System Administration related to student FTE calculations. We also reviewed state laws, relevant legislative committee and Board of Regent's committee minutes, and consultant reports that had a bearing on FTE calculations. We documented the process each institution follows in reporting FTE's to System Administration. Additionally, we reviewed reports from other states on enrollment audits and issues, reviewed System Computing Services (SCS) involvement in the FTE calculation process, reviewed budget documents and researched the history of changes to the enrollment process.

To accomplish our objectives, we first reviewed documentation related to the calculation and processing of FTE data that System Administration provides to the institutions. We then discussed the level of guidance they provide the institutions to determine if it is sufficient.

To determine the accuracy of enrollment data, we obtained the fall 2003 semester STAT files for UNLV, UNR, CCSN, and TMCC. The STAT file is an extract from SIS containing student enrollment data. We performed queries on the files to calculate and document the FTE count for fall 2003. We then compared our calculations to the FTE count the institutions provided to System Administration.

We performed a review of class beginning and ending dates looking for summer and interim classes that were included in the fall 2003 FTE count. We tested classes from selected institutions to verify that they qualify for inclusion in the FTE count. We

also eliminated non state-supported courses from the fall 2003 semester to ensure they were properly excluded from the FTE count. In addition, we reviewed the methods used by the selected institutions for calculating the FTEs and related control procedures.

We tested the validity of student and enrollment data by selecting a sample of 200 students and tracing back to admissions records and cash receipts to confirm full payment of tuition and fees. To further verify the legitimacy of the students counted, we reviewed SIS for students who made no payments to ensure they were properly excluded from the FTE count.

We reviewed zero credit courses and verified that they were not included as credit bearing courses for FTE purposes. We documented the methods the selected institutions have in place to control how funding codes are placed in the enrollment extracts. We also queried the STAT file looking for upper division courses with an excess of freshmen students. This test was used to determine if any courses were classified as upper level but should have been classified as a lower level course with a lower funding level. We also reviewed the classification of courses created by System Administration.

To review the controls surrounding SIS in System Administration as well as the institutions, we identified users listed with update access to data that could impact the FTE count. We then reviewed these individuals to ensure they were currently employed and whether access was appropriate based upon their current job assignments.

Our audit work was conducted from September 2003 to April 2004 in accordance with generally accepted government auditing standards.

In accordance with NRS 218.821, we furnished a copy of our preliminary report to the Chancellor of the University and Community College System of Nevada. On August 17, 2004, we met with UCCSN officials to discuss the results of the audit and requested a written response to the preliminary report. That response is contained in Appendix D, which begins on page 24.

Contributors to this report include:

Kimberly C. Arnett, CPA
Deputy Legislative Auditor

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Appendix B

Prior Audit Recommendations

Our 1996 audit of the University and Community College System of Nevada contained ten recommendations. However, none of these recommendations were related to the validity and reliability of enrollment data. Therefore, we did not assess UCCSN's implementation of the prior audit's recommendations.

Appendix C
Assembly Bill 148

Assembly Bill No. 148—Assemblymen Perkins, Leslie, Parks, Gibbons, Knecht, Anderson, Andonov, Angle, Arberry, Atkinson, Beers, Brown, Buckley, Carpenter, Chowning, Christensen, Claborn, Collins, Conklin, Geddes, Giunchigliani, Goicoechea, Goldwater, Grady, Griffin, Hardy, Hettrick, Horne, Koivisto, Mabey, Manendo, Marvel, McClain, McCleary, Mortenson, Ocegüera, Ohrenschall, Pierce, Sherer, Weber and Williams

Joint Sponsors: Senators Care, Carlton, O'Connell, Amodei, Cegavske, Hardy, McGinness, Neal, Nolan, Rhoads, Schneider, Shaffer, Townsend, Washington and Wiener

CHAPTER.. 442

AN ACT relating to higher education; requiring the Legislative Auditor to conduct an audit of the University and Community College System of Nevada and the Board of Regents of the University of Nevada; and providing other matters properly relating thereto.

THE PEOPLE OF THE STATE OF NEVADA, REPRESENTED IN
SENATE AND ASSEMBLY, DO ENACT AS FOLLOWS:

Section 1. 1. The Legislative Auditor shall conduct an audit of the University and Community College System of Nevada and the Board of Regents of the University of Nevada.

2. The audit must include, without limitation, an analysis of:

- (a) Capital construction projects;
- (b) The cost of athletic programs, including, without limitation, the sources and uses of money for such programs;
- (c) The cost of administration, including, without limitation, personnel, travel and other associated costs;
- (d) The utilization of host accounts;
- (e) The validity and reliability of enrollment data;
- (f) Policies and procedures for the generation and distribution of investment income;
- (g) Contracting and bidding procedures, including, without limitation, construction, retrofit and repair projects and the use of "shared savings" programs to pay for utility costs and energy conservation projects; and
- (h) Statewide programs, including, without limitation, program selection, funding and outcomes.

3. The Legislative Auditor shall present a final written report of the audit to the Audit Subcommittee of the Legislative Commission not later than February 7, 2005.

4. The provisions of NRS 218.737 to 218.890, inclusive, apply to the audit conducted pursuant to this section.

Sec. 2. 1. Upon the request of the Legislative Auditor, the University and Community College System of Nevada shall transfer from its budget to the Audit Division of the Legislative Counsel Bureau the sum of \$90,000 to carry out the provisions of section 1 of this act.

2. Any remaining balance of the sum transferred pursuant to subsection 1 must not be committed for expenditure after February 7, 2005, and reverts to the University and Community College System of Nevada as soon as all payments of money committed have been made.

Sec. 3. This act becomes effective on July 1, 2003.

Appendix D

University and Community College System of Nevada's Response

University and Community College System of Nevada

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August 30, 2004

State of Nevada
Legislative Counsel Bureau
Paul Townsend, Legislative Auditor
401 S. Carson St.
Carson City, Nevada 89701-4747

Dear Mr. Townsend:

Attached is the University and Community College System of Nevada response to the Validity and Reliability of Enrollment Data Audit Report prepared by the Legislative Counsel Bureau audit staff.

We would like to thank the LCB staff for the courtesy extended to all UCCSN employees during this review.

Please contact me if you have any questions on the items provided.

Very truly yours,

Buster Neel by Ginny Wiswell

Harry E. Neel, Jr.
Vice Chancellor for Finance and Administration

Attachment

Below is the UCCSN response to the Legislative Counsel Bureau (LCB) draft audit report of Validity and Reliability of Enrollment Data.

Recommendation 1: Direct institutions to create formal written procedures and a documented review process over calculation of student FTE.

System Administration will coordinate efforts to address this recommendation by requiring each institution to delineate its process for calculating FTE. Annual reminders will be sent in conjunction with the request for official FTE data, directing institutions to establish and maintain FTE calculation procedures. The documentation will include formalized steps and responsibilities of staff in the process of calculating state-supported FTE, as well as detailed procedures for downloading data from the mainframe, processing and computing information to reach state-supported FTE totals, and reviewing data for validity and reliability. The formalized documentation of these processes will be established during the 2004-05 academic year and will be implemented in Fall 2005.

Recommendation 2: Create a common system-wide method for identifying state-supported courses in SIS.

It is recognized that throughout the UCCSN, institutions use the same criteria to identify state-supported courses, however, the data they store and the methods they use to glean state-support courses from SIS often differ. In an effort to produce a simplified and common approach to identifying state-supported courses in SIS, System Administration will work with the Directors of Institutional Research and the statewide SIS Users Group to develop a common method. This system-wide method for identifying state-supported courses in SIS will be incorporated into each institution's formalized documentation of the process of calculating state-supported student FTE. This recommendation will be carried out during the 2004-05 academic year and used in the official calculation of FTE in Fall 2005.

Recommendation 3: Direct institutions to periodically review courses to ensure only appropriate ones are included in the official student FTE count.

System Administration will help facilitate this recommendation by encouraging institutions to conduct annual reviews of courses used to calculate state-supported FTE, and also by clarifying what criteria constitute state-supported courses (see clarification of FTE reporting policy in recommendation #4). System Administration will inform the institutions of the need to conduct periodic reviews of courses used in FTE calculations during the 2004-05 academic year and encourage them to include a statement related to reviewing timelines within the formal documentation and procedures developed for calculating FTE.

Recommendation 4: *Clarify System Administration policies to specifically address summer courses and non state-supported courses, including the definition of normal costs.*

During the 2004-05 academic year, System Administration will restate its policy on FTE reporting to clearly delineate the definition and criteria related to state-supported courses. The redevelopment of this policy will also address the definition of “normal costs of instruction” as well as specifically identify the timelines related to reporting FTE occurring within summer sessions versus FTE occurring within fall and spring semesters. Institutions will be instructed to follow these new policies beginning in Fall 2005.

Recommendation 5: *Direct institutions to review their security reports, ensuring only appropriate users are listed with SIS update access.*

The UCCSN institutions will review their security procedures to affirm access to SIS is limited to authorized staff. The institutions will also identify improvements that can be implemented to ensure that adequate safeguards are in place to verify access for employees and staff. The institutions will, on an ongoing basis, review the overall security procedures and employee access.

UCCSN Response to Audit Recommendations

<u>Recommendation Number</u>		<u>Accepted</u>	<u>Rejected</u>
1	Direct institutions to create formal written procedures and a documented review process over calculation of student FTE.....	<u> X </u>	<u> </u>
2	Create a common system-wide method for identifying state-supported courses in SIS.....	<u> X </u>	<u> </u>
3	Direct institutions to periodically review courses to ensure only appropriate ones are included in the official student FTE count.....	<u> X </u>	<u> </u>
4	Clarify System Administration policies to specifically address summer courses and non state-supported courses, including the definition of normal costs	<u> X </u>	<u> </u>
5	Direct institutions to review their security reports, ensuring only appropriate users are listed with SIS update access	<u> X </u>	<u> </u>
	TOTALS	<u> 5 </u>	<u> 0 </u>