UNIVERSITY and COMMUNITY COLLEGE SYSTEM OF NEVADA

REPORT ON

DISTANCE EDUCATION

OCTOBER 2002

For Presentation to the
Academic, Research and Student Affairs Committee
at the December 12, 2002 Meeting

University and Community College System of Nevada

Board of Regents

Directors of Distance Education

Cynthia Glickman
Community College of Southern Nevada

Garry Heberer
Great Basin College

Fred Lokken
Truckee Meadows Community College

Charlotte Farr
University of Nevada, Las Vegas

Gay Neuberger
University of Nevada, Reno

Michael Downey
Western Nevada Community College

Roger Jacobson
Desert Research Institute

Report Prepared by the Office of Academic and Student Affairs
Office of the Chancellor

ACKNOWLEDGEMENTS

This report is the collective work of many people, both at the campuses and in the System Administration Office. However, the brunt of the effort falls upon the campuses. It is campus personnel who are responsible for analyzing campus files to provide summary information to the System Administration Office. Thank you to each of the Distance Education Directors for their assistance in creating this report.

Crystal M. McGee
Senior Research Analyst
Office of Academic and Student Affairs

TABLE OF CONTENTS

PART I
CRITICAL ISSUES FOR DISTANCE EDUCATION

PART II
THE CURRENT STATUS OF DISTANCE EDUCATION

PART III
THE FUTURE OF DISTANCE EDUCATION

APPENDICES

EXECUTIVE SUMMARY

Distance Education (DE) provides access to higher education to a growing student population of traditional and non-traditional students who may be subject to constraints such as time, distance or a physical disability and therefore are not able to attend traditional courses on campus. At its most basic level, DE takes place when a teacher and student are separated by physical distance. Institutions across the country are addressing growing demand for higher education and limited funding with DE programs, and the institutions of the University and Community College System of Nevada (UCCSN) are no exception.

Since 1997, the number of pure DE courses offered System-wide increased from 137 to 396 (a 189 percent increase). This increase in courses was necessary to meet the growing enrollment demands for DE courses across the state. System-wide annualized unduplicated headcount for pure DE courses increased from 2,130 in 1997-1998 to 8,006 in 2001-2002 (a 275 percent increase). Despite the increase in courses, there still exists unmet demand for DE courses. This is evident from the fact that several campuses are faced with often thousands of "attempts" by students to register for DE courses that have been filled.

The most notable growth in DE can be seen in the increase in average annual FTE from 1997 to 2001. System-wide AAFTE for pure DE courses increased 392 percent in five years, dramatically outpacing the UCCSN's overall AAFTE, which increased 19 percent in five years. In the 2001-2002 academic year, AAFTE for pure DE amounted to 4.26 percent of the System's overall AAFTE. A noticeable increase from the 1.03 percent of the 1997-1998 academic year.

A number of the UCCSN institutions have developed DE degree programs. Both GBC and UNLV offer degree completion programs where students who have previously completed coursework on campus, but are no longer able to attend classes on campus, may complete the requirements for a Bachelor of Arts in Social Science Studies(at UNLV) and Bachelor of Applied Science (at GBC). At CCSN students completing the required DE courses may earn an AA in English or General Studies and an AS in Social Science. Truckee Meadows Community College offers an Associate's Degree with emphases in Business, Psychology, History, or English. And, UNR is near completion of its third iteration of a DE cohort Masters of Business Administration in Elko.

Despite the campus' success in meeting the growing demand for DE courses with limited funding resources, there exist a number of issues critical to the future success of these DE programs. These issues include staffing, licensing, training, funding, administration, intellectual property rights, student support services, retention, infrastructure, accreditation, and strategic planning. The UCCSN campuses are at a critical juncture. Existing resources for DE are showing the signs of strain, and the future success of DE may be contingent on access to additional resources to address ever-increasing demand for DE programs and courses.

INTRODUCTION

This report was prepared in accordance with the mandates of the University and Community College System of Nevada (UCCSN), Board of Regents' *Handbook*. Title 4, Chapter 14 (UCCSN Planning, Program Review, Articulation and Enrollment) requires regular Distance Education (DE) reporting to the Board. Specifically, subsection 10 of Section 10 provides the following:

> 10. On an annual basis, the UCCSN institutions will prepare a program plan that details proposed new distance education offerings by course and program title and by site (id appropriate) and whether it will be delivered statewide. The UCCSN plan for distance learning will be prepared in accordance with the following principles:
>
>   a. Plan as a system to address state needs;
>   b. Operate programs collaboratively and share resources, if appropriate;
>   c. Base program decisions on documented student or citizen need;
>   d. Work with constituent groups (e.g., K-12 school districts, employers, industry representative) to identify and prioritize the most pressing education needs;
>   e. Use a combination of technologies, as appropriate to curricular needs and student learning styles;
>   f. Ensure that academic plans influence the expansion of the technical infrastructure;
>   g. Provide essential support services to students;
>   h. Build institutional and system capacity to address more needs through distance learning;
>   i. Be accountable to the Legislature and the public for their use of state resources and the quality and appropriateness of their services;
>   j. Partner with or broker programs from out-of-state institutions, where appropriate.

This report provides an overview of distance education in the UCCSN, identifying critical issues, outlining the growth in DE among the campuses, highlighting existing programs, and summarizing new or proposed programs.

In addition, it is important to note the unique scope of DE at the University of Nevada, Reno, which includes the University of Nevada Cooperative Extension program and the University of Nevada, School of Medicine. These programs are separate and distinct from the predominately academic credit DE courses offered on the main UNR campus; and therefore are discussed separately in Appendix A and Appendix B of this report.

What is Distance Education?

Within a context of rapid technological changes and growing demands on higher education, the UCCSN is challenged with providing increased educational opportunities without increased funding. The System is also challenged with meeting the educational demands of students who for a variety of reasons are unable or unwilling to attend classes on campus. The System's two research universities, four community colleges, and its new state college, like many educational institutions across the country, are meeting these challenges by developing distance education programs.

At its most basic level, distance education takes place when a teacher and student are separated by physical distance. Technology (i.e., compressed video, Web CT), often in concert with face-to-face communication, is used to bridge this physical gap between teacher and student. Distance education programs provide a wealth of educational opportunities for a growing student population including traditional and non-traditional students when constraints such as time, distance or a physical disability are of issue.

It is important to make a distinction between pure or "stand alone" DE courses and hybrid or enhanced DE courses. For the purposes of this report, a pure DE course is one in which there is no contact between student and teacher in the sense of contact in a traditional classroom setting. Hybrid courses, where traditional student/teacher contact in the classroom is augmented with work on the Internet or with interactive video, are heavily utilized on all UCCSN campuses, but these are not the focus of this report.

How are Distance Education courses delivered?

The UCCSN campuses utilize various technologies to deliver DE courses. Methods of DE course delivery have evolved with ever-changing technologies. The first generation of DE courses, telecourses, typically used a combination of printed materials and videocassette tapes to substitute for a traditional classroom environment. This method of DE course delivery is still utilized by some campuses today. However, the primary methods of DE course delivery are cable, interactive video, and web-based courses.

Cable

Truckee Meadows Community College and the Community College of Southern Nevada offer classes in partnership with local cable franchises. Students are able to view lectures at home. Students are passive observers of a traditional classroom setting and may record a class for later viewing. In a number of instances, classes are broadcast live; this allows students to interact with the instructor either by calling in or through an online chat-room.

Interactive Video (IAV)

Interactive video is the most like a traditional classroom in that students attend class in an IAV classroom and may participate in class via a two-way interactive audio/video television or a one-way video with two-way audio. Until recently, this method of course

delivery was the most common method used for pure DE courses among the UCCSN campuses, and is still a vital method of course delivery among the northern campuses.

Geographic service areas for IAV are defined under Section 10, Title 4, Chapter 14 of the Board of Regent's *Handbook*, which specifies that such service areas are appropriate when designating the institution with responsibility for 1.) establishing and maintaining IAV sites in an area, and 2.) coordinating the receipt of programs using IAV with offering institutions. Service areas are defined as follows:

SERVICE AREAS FOR INTERACTIVE VIDEO	
Institution	**Service Area**
Community College of Southern Nevada	Clark, Lincoln, Nye, and Esmeralda counties
Great Basin College	Elko, Eureka, Humboldt, Lander, and White Pine counties
Truckee Meadows Community College	The greater urban area of Reno-Sparks, and Incline Village
University of Nevada, Las Vegas	The southern portion of the state including Clark and Lincoln counties. Esmeralda, Nye, and White Pine counties (served by both UNLV and UNR). Tonopah and Ely, and all parts south of the line joining the two cities.
University of Nevada, Reno	Washoe, Douglas, Carson City, Storey, Lyon, Humboldt, Pershing, Churchill, Mineral, Elko, Lander, Eureka counties. Esmeralda, Nye, and White Pine counties (served by both UNR and UNLV). Tonopah and Ely, and all parts north of the line joining the two cities.
Western Nevada Community College	Storey, Carson City, Douglas, Lyon, Churchill, Pershing and Mineral counties and the rural areas of Washoe County, with the exception of Incline Village.

Web-Based

Today, campuses are developing a greater number of Internet or web-based courses. This is the most recent technology utilized by campuses for DE course delivery. Internet courses use a combination of printed and electronically delivered materials via the World-Wide Web to substitute for a traditional classroom setting. There are no

delineated service areas for Web-based courses as there are for IAV courses. For the University of Nevada, Las Vegas; Truckee Meadows Community College; and the Community College of Southern Nevada; the Internet is the predominate method of DE course delivery.

PART I
CRITICAL ISSUES FOR DISTANCE EDUCATION

The phenomenal growth in interest in DE programs across the state, both by students and faculty, is the most significant message of this report. It is a success story based on limited resources, which has grown to serve the educational needs of many Nevadans. The data clearly indicates that interest, especially in web-based instruction, has far-exceeded anyone's expectations. All programs prioritize their delivery of classes to students that might otherwise not be able to attend traditional classes. Distance Education programs have identified an obvious need and have crafted an appropriate niche for expanded access and opportunity to higher education for citizens of Nevada.

However, this growth does bring with it certain challenges. A number of critical issues have emerged which will need to be addressed if this success story is to continue, including issues related to staffing, licensing, training, funding/budget, administration, intellectual property rights, student support services, retention, infrastructure, accreditation, and strategic planning.

Staffing

In the absence of any special or dedicated funding, each campus has worked to shift existing limited resources to meet the growing need for training, course development, technical support and operations, clerical assistance, and administration. Distance Education programs have created new student demand rather than recruiting students from traditional classes. Increasingly, this new demand fosters an internal personnel resource issue since campuses are hard-pressed to take from one program to give to another. In addition, most faculty require rather significant learning curves and substantial hands-on assistance to succeed in the development of course content and to learn how to manage a virtual classroom.

Licensing

All UCCSN campuses utilize WebCT as the instructional platform for web-based instruction. An annual statewide contract is negotiated by System Computing Services (SCS). Nevada's campuses have already experienced a near-doubling in WebCT licensing costs in the past year. For the 2003-2004 fiscal year, campuses are expecting another 400% increase in licensing costs. (For example: TMCC will experience an increase from $7,500 this fiscal year to $35,000 for FY 2003-2004). A number of

questions are looming concerning how campuses will absorb this increase in licensing fees.

Training

Training in web-related instruction offers an outstanding opportunity to assist faculty in embracing the use of instructional technologies in traditional as well as virtual classrooms. The UCCSN Master Plan endorses this and the Northwest Association of Schools and Colleges mandates it in accreditation. Unfortunately, campuses lack the resources to mount effective, comprehensive training programs in instructional technologies. Additional personnel are needed, and they of course, need to be trained and certified themselves. The issue is not merely about a shortage of personnel; it also requires the resolve of each institution to establish this type of training as a top priority.

Funding/Budget

Notable increases in DE enrollment (especially web-based instruction) occurred following the enactment of Senate Bill 204 (Chapter 710, *Statutes of Nevada 1995*) and Assembly Bill 606 (Chapter 411, *Statutes of Nevada 1997*), which provided special legislative funding for DE. During the recent years, the System attempted to address the larger issue of funding technology. Two years ago, each campus instituted a $4 per credit Technology Fee to help underwrite upgrades and life-cycle replacements, but the current funding is overwhelmed by competing needs (academic computer labs, general access computer labs, Smart classrooms, discipline-specific software and equipment needs, etc.). Technology funding was also discussed during the recent dialog over a new system budget taxonomy which dedicates 2 percent of net budget growth for technology. Unfortunately, four campuses (UNLV, CCSN, TMCC, and WNCC) currently find themselves in "hold harmless" funding conditions. New, more reliable funding solutions must be identified to provide remediation for the staffing, training and licensing challenges.

Administration

The sudden increases in DE enrollments have compounded internal organizational issues related to the administration of technology-based instruction. In many ways, especially web-based instruction has prompted a paradigm shift that challenges traditional instruction. Campus administrations have struggled to grasp the implications of this shift; virtual classes require a different kind of infrastructure – not brick and mortar or parking spaces but rather file servers, campus-wide licensing and appropriate technical support. It is also clear that DE enrollments are a substantial element in overall campus enrollment growth. Campuses are administratively structured to deal with traditional instruction and need to review how DE programs are managed. Campuses must find ways to integrate DE into the mainstream of campus administration.

Intellectual Property Rights

The System lacks any specific policy on intellectual property rights addressing ownership of web-based content. The need for a consistent and comprehensive set of policies is essential in defining the rights of faculty and of the System. It is critical that an agreed to policy be in place before further growth in classes occurs.

Student Support Services

Accreditation requires that a DE course be equivalent to a traditional course and further requires that a DE student receive an equivalent level and quality of student support services. In many instances, it may be beneficial to consider a more cost-effective method to coordinate these services among the campuses. Resources are required to address the relevant training needs for new student orientation, counseling and advising, financial aid, registrar services, fee collection, library services, textbook services and student government.

Retention

During the 2001-2002 academic year, the following tables indicate the percentage of students who successfully completed a pure DE course (defined as students who received a passing grade in the course and did not withdraw as a percent of number of pure DE course registrations).

	FALL 2001		
	Number of Pure DE Course Registrations	**Number of Successful Course Completions**	**Percent**
CCSN	4,356	2,661	61.1%
GBC	1,289	964	74.8%
TMCC	1,250	725	58.0%
UNLV	1,130	841	74.4%
UNR*	379	346	91.3%
WNCC	949	703	74.1%

	SPRING 2002		
	Number of Pure DE Course Registrations	**Number of Successful Course Completions**	**Percent**
CCSN	*Data not available at time of report.*		
GBC	1,467	1,185	80.8%
TMCC	1,848	1,143	61.9%
UNLV	1,720	1,230	71.5%
UNR*	381	365	95.8%
WNCC	884	649	73.4%

* The above figures do not include UNR Independent Learning's Web-based courses. The data cannot be determined in this format. However, in general for Independent Learning open enrollment courses, there is a 49% completion rate. This is consistent with national trends. The exception is UNR Independent Learning graduate level courses, which have a 98% completion rate. Three semester-based courses were offered in Fall 2001–Spring 2002. The completion rate was 69%. This higher completion rate for semester-based web courses is also consistent with national trends for Independent Learning programs.

National studies indicate that most DE programs experience a lower percentage of retention than traditional classes. Analysis of the issue suggests there are a number of reasons for lower retention rates in DE:

- Inadequate pre-screening of students;
- Poor training of faculty;
- Lack of adequate student support services; and
- Challenges related to working independently as a student.

Retention is of critical importance as all UCCSN campuses are committed to achieving a rate that is at least on par with traditional classes. It is important to recognize that campuses must be willing to secure adequate resources to effectively address retention issues in DE courses.

Infrastructure

Campuses require additional server capacity, bandwidth, and technical support to sustain current web-based programming. If campuses are to continue to "grow" DE enrollments, solutions to current inadequate infrastructure must be addressed. Also, significant instruction continues on the aging NevadaNet interactive video network. NevadaNet has been highly successful in addressing the educational needs of rural Nevadans. Web-based instruction does not serve as an appropriate alternative given a relatively primitive communication infrastructure. There is a pressing need to address necessary equipment upgrades and replacements to stabilize NevadaNet and retain its educational benefits.

Accreditation

All campuses have been subject to special on-site DE accreditation visits by the Northwest Association of Schools and Colleges. Each campus must be prepared to demonstrate that there is:

- Adequate administrative support;
- Sufficient funding;
- Appropriate staffing;
- Equivalent student support services; and
- Specific program planning.

It is advisable that each campus address any and all deficiencies in advance of an accreditation site visit/report.

Strategic Planning

The UCCSN campuses and the System must determine the appropriate current and future role of DE. The potential exists to link the System's various DE programs, to coordinate statewide degree and certificate opportunities, to better serve traditional students and to embrace un-served students. Statewide efforts will require statewide planning and coordination. Further evolution of DE is impossible without a strong sense of commitment and resources both from individual institutions and from the System.

Conclusion

The UCCSN campuses are at a critical juncture. Existing resources (staffing, budget, and infrastructure) are significantly strained. The continued success and growth in enrollments for DE programs in Nevada are inextricably tied to assigning additional resources (financial and personnel) and administratively embracing DE programs.

PART II
THE CURRENT STATUS OF DISTANCE EDUCATION

ENROLLMENT GROWTH IN DISTANCE EDUCATION

As quickly as technology has advanced, so have the opportunities and demands for distance education. Following are a number of graphs that illustrate the enrollment growth in pure DE courses among the UCCSN campuses. These graphs show growth since Fall 1997, a critical time for DE in Nevada, when the Nevada State Legislature authorized funding for DE programs at the UCCSN through Assembly Bill 606 (Chapter 411, *Statutes of Nevada 1997*). Since 1997, these programs have received no state funding directly from a legislative appropriation, but have received funds from internal campus sources.

Despite the loss of program funding from the State, the following analysis illustrates that DE programs on all UCCSN campuses have worked to respond to growing student demands for DE courses over the past five years. The Community College of Southern Nevada, in particular, exhibited considerable growth over the five-year period, which is attributed, in part, to the program's pursuit of Web-based courses. It appears that in a state like Nevada, where much of the workforce (e.g. casino workers) have ever-changing work schedules, Web-based courses offer the flexibility needed for such individuals to successfully pursue course work. Other non-traditional students such as working mothers and family caretakers also benefit from the flexibility of these courses when attending scheduled courses is not feasible. This flexibility is the key to the success of many campus DE programs in Nevada and across the country.

The growth in distance learning among the UCCSN institutions is not unique; programs of this nature are growing across the nation. According to a 1999 report by the U.S. Department of Education, between 1994 and 1998 student enrollment in distance learning approximately doubled from 750,000 to 1.3 million students. It is likely that these numbers are considerably larger today. A recent survey by the International Data Corporation (IDC) found that 2 million students enrolled in online courses in 2001, and the U.S. Distance Learning Association projects that number to grow to 5 million by 2006.[1]

The following sections highlight the enrollment growth across the UCCSN institutions in terms of number of DE courses, headcount, and FTE between Fall 1997 and Spring 2001. The data used to create these illustrations are included in Appendix D.

DE Courses Held

Each of the UCCSN campuses exhibited constant growth over the five-year period examined. The University of Nevada, Las Vegas increased its annualized average of courses held from 15 in 1997-1998 academic year to 58 courses in the 2001-2002 academic year (a 287 percent increase). Similar growth was exhibited among the other campuses, CCSN increased from 17 courses in 1997-1998 to 103 in 2001-2002 (a 506 percent increase). Over the five-year period reviewed, considerable changes in technology may account for some of the growth in DE courses offered.

In more recent years, record growth is also notable. For example, TMCC increased its annualized average of courses held by 104 percent between 2000-2001 and 2001-2002 academic years from 26 to 53 courses held.


---
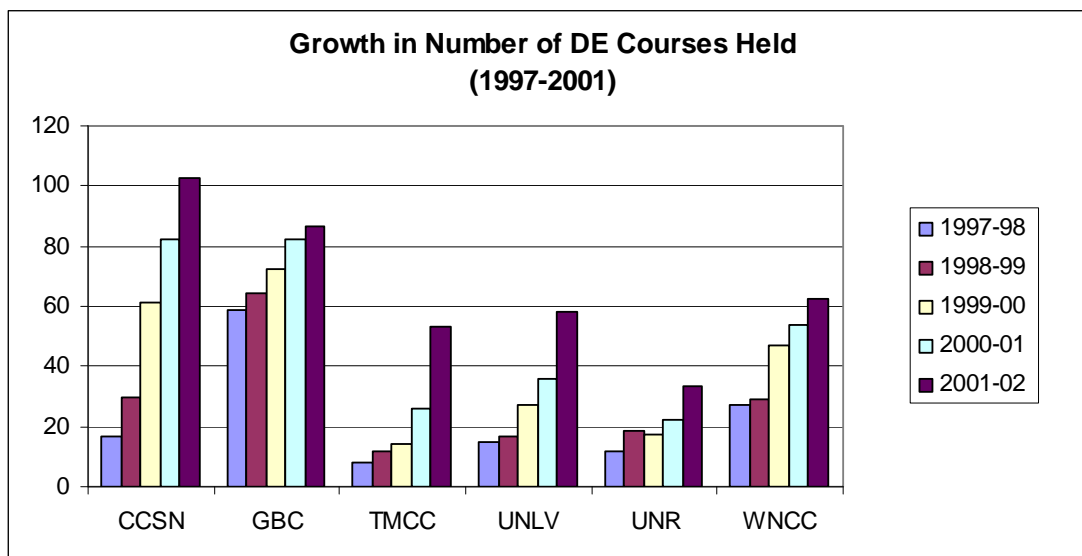
[1] Boggs, and Webber S. (2000). Distance Learning in Higher Education: Market Forecast and Analysis, 1999-2004. International Data Corporation. Document Number 23539.

For the System as a whole, the average number of courses held increased from 137 in 1997-1998 academic year to 396 in 2001-2002 (a 189 percent increase).

Unduplicated Headcount

Unduplicated headcount is a measure of the number of students who enrolled in at least one pure DE course. The following graph illustrates that considerable growth also occurred in this area over the past 5 years. For example, Great Basin College increased its average unduplicated headcount from 728 in 1997-1998 to 1,375 in 2001-2002. Truckee Meadows Community College exhibited similar growth in average headcount increasing from 57 to 1,084 over the same time period. The Community College of Southern Nevada is yet another example of extreme growth in headcount, increasing from 365 in 1997-1998 to 3,118 in 2001-2002.

Growth of Unduplicated Headcount (Annualized) for Pure Distance Education Courses (1997-2002)
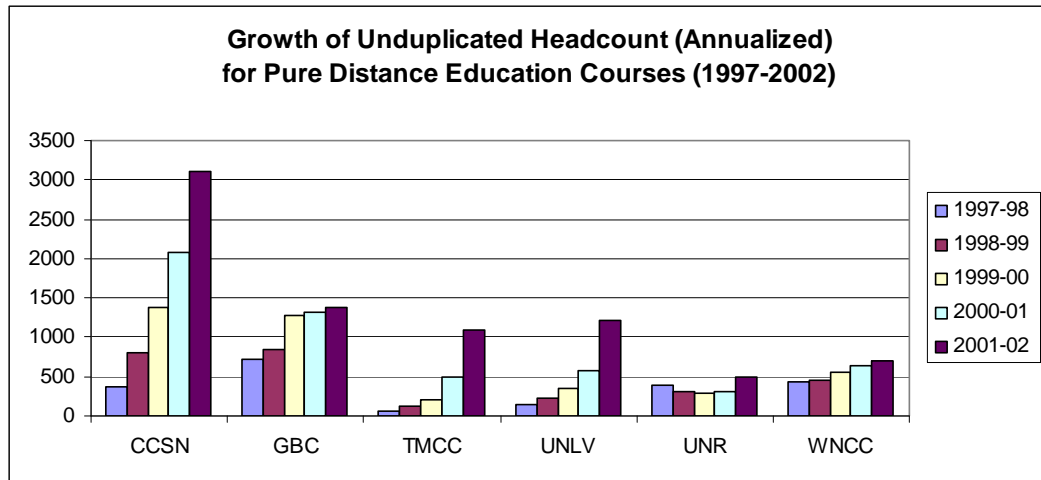
Average Annual FTE

Average annual FTE is a measure of workload based on the number of credit hours taught. The following graph illustrates the growth in annualized FTE for pure DE courses across UCCSN institutions from Fall 1997 to Spring 2002. As with the other enrollment measures discussed, annualized FTE has grown considerably. For example, CCSN's annualized FTE increased from 92.64 during the 1997-1998 academic year to 978.98 in the 2001-2002 academic year (a 957 percent increase). Annualized FTE for UNLV grew from 32.83 in 1997-1998 to 322.70 in 2001-2002 (an 883 percent increase).

Growth in Annualized FTE for Distance Education (1997-2001)
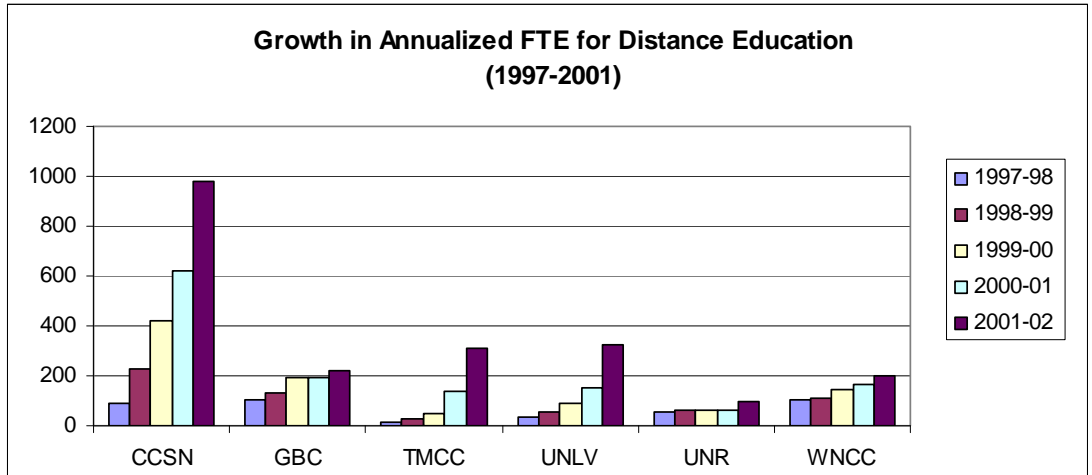
The following graph compares the System-wide annualized FTE for pure DE courses to the overall System's annualized FTE. From this graph it is apparent that growth in FTE for DE has outpaced the System's overall FTE. System-wide FTE for DE grew 392 percent between the 1997-1998 academic year and 2001-2002. During the same five-year period, the System's overall FTE grew 19 percent.

Percent Change in UCCSN Average Annual FTE verses UCCSN Distance Education Average Annual FTE

Annual Average FTE		
	UCCSN	UCCSN-DE
97-98	42,013	433
98-99	44,199	608
99-00	46,809	951
00-01	48,107	1,323
01-02	49,949	2,129
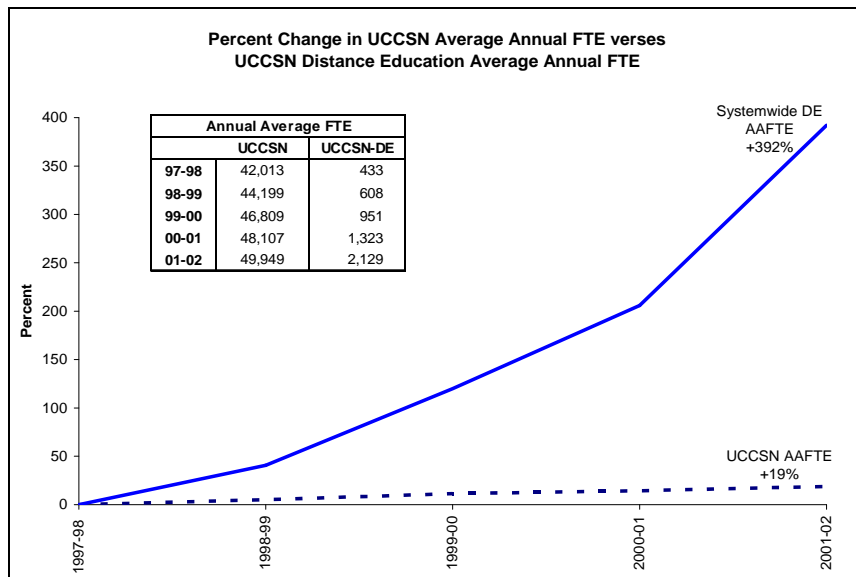
The following graph depicts the AAFTE for DE across the System as a percent of UCCSN's AAFTE. Since the 1997-1998 academic year, AAFTE for distance education has steadily increased as a percent of the System's AAFTE from 1.03 percent to 4.26 percent in 2001-2002.

Distance Education AAFTE as a percent of UCCSN AAFTE

Annual Average FTE		
	UCCSN	UCCSN-DE
97-98	42,013	433
98-99	44,199	608
99-00	46,809	951
00-01	48,107	1,323
01-02	49,949	2,129

Chart data points:
- 1997-98: 1.03%
- 1998-99: 1.38%
- 1999-00: 2.03%
- 2000-01: 2.75%
- 2001-02: 4.26%
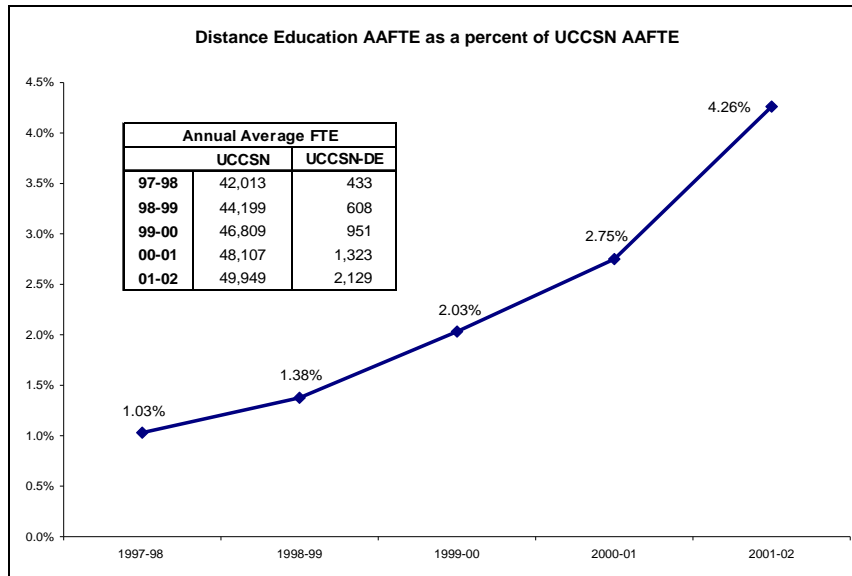
In sum, these graphs provide a clear indication of each campus's commitment to providing programs and services that address the unique educational goals of Nevada's highly diverse and non-traditional population. However, it is important to note that demand for DE courses on each of the campuses often exceeds course capacity. Following is a table with information concerning the number of "attempts" to register for a DE course. "Attempts" is defined to mean the number of attempts to register for a course after the course has been filled.

	Number of "Attempts" to Register for Pure DE Courses		
	Fall 2001	**Spring 2002**	**TOTAL**
CCSN	9,053	12,312	21,365
GBC	112	84	196
TMCC	960	1,550	2,510
UNLV	1,028	3,574	4,602
UNR	77	0	77*
WNCC	99	120	219

* UNR's figures are for WebCT semester-based courses only. Students interested in enrolling in IAV courses have always been accommodated. Independent Learning courses do not have maximums.

DISTANCE EDUCATION EXTERNAL PARTNERSHIPS

The UCCSN campuses recognize the value of forging partnerships outside of the System to facilitate delivery of DE courses. In a number of cases, these partnerships allow the various campuses to reach markets to which they otherwise might not have ready access. In addition, some partnerships have allowed community organizations to utilize UCCSN resources. Further, intra-system partnerships have been formed among a number of the campuses, as individual campuses know the importance of sharing resources. In all cases, these partnerships allow the campuses to deliver DE courses more efficiently and effectively.

The following are the DE external partnerships formed by respective UCCSN campuses:

Community College of Southern Nevada

- Lincoln County School District
- National Institute for First Assisting
- ACT Center
- ITC Learning Corporation

Great Basin College

- Elko County Public Schools
- White Pine Public Schools
- Humboldt County Public Schools
- Eureka County Public Schools
- Duck Valley Housing Authority
- Duck Valley Hospital
- Lander County Extension Service
- Community hospitals in Winnemucca, Elko, and Ely
- Peace Officers Standards and Training (POST)
- County Libraries in Elko, Lander, and Eureka
- Area Health Education Center
- Northeastern Nevada Technology Consortium
- Rural Emergency Medical Grant Partners

Truckee Meadows Community College

- Reno/Sparks/Washoe County Public Safety Joint Training Center
- Washoe County School District
- Sierra Nevada Job Corps
- Washoe Medical Center
- Paiute Nation (selected courses)
- Charter Cable Systems
- Sierra Nevada Community Access Television (SNCAT)
- Channel 5/KNPB Public Broadcasting
- System Computing Services (SCS)
- California Virtual College/Professional Development Center
- Nevada State Health Division/Center for Disease Control Education programs
- Association of Product Inventory Control Specialists
- Nevada Opticians Association
- Nevada Dental Hygiene Association
- Nevada Division of Aging Services
- Nevada Rural Health Project

University of Nevada, Las Vegas

- Clark County School District
- Pahrump Valley High School
- Mineral High School
- National Association of State Directors of Special Education
- Borderless Access to Training and Education (BATE) (in cooperation with the University of Montana and the University of South Dakota)
- Economic Opportunity Board of Clark County

University of Nevada, Reno

- Churchill County School District
- Douglas County School District
- Lyon County School District
- Washoe County School District
- Nevada State Library and Archives
- Humboldt County Hospital
- Mt. Grant Hospital (Hawthorne)
- Pershing General Hospital
- Elko County School District
- Lund High School
- Nye County School District
- QuadraVision Wireless Cable
- National Judicial College
- Nevada Public Libraries
- State of Nevada Attorney General
- CYFERnet (national Extension/Land Grant University web site)

Western Nevada Community College

- Carson City School District
- Douglas County School District
- Lyon County School District
- Mineral County School District
- Pershing County School District
- Lyon County
- Nevada Commission on Economic Development
- Nevada Department of Prisons (Staff Development)
- Nevada Department of Training and Rehabilitation
- Nevada Emergency Medical and Trauma Services
- Harley-Davidson Financial Services
- Bently Nevada Corporation

It is apparent that the institutions of the UCCSN have devoted considerable efforts to establishing and maintaining partnerships with the community. These partnerships enrich the lives of Nevada citizens, and will continue to do so into the future.

DEGREE PROGRAMS AND COURSES

As technologies for delivering DE evolved, so have the DE programs and courses offered by UCCSN institutions. A number of the campuses offer degree programs where students may earn a degree after taking the required DE courses within specific discipline.

Degree Programs

The University of Nevada, Las Vegas, offers a Bachelor of Arts in Social Science Studies tailored to students seeking a wide range of knowledge applicable to a variety of careers. This degree completion program is intended primarily for students who have completed, or nearly completed the equivalent of the first two years of college and are unable to complete the degree because they cannot attend classes on campus.

Similarly, TMCC offers an Associate's Degree (AA) with emphases in Business, Psychology, History, and/or English, which may also be obtained through completion of the required DE courses. The Community College of Southern Nevada offers an AA in English and General Studies, and an AS in Social Science. Western Nevada Community College currently does not offer a degree that may be earned taking DE courses only, but its goal is to offer an Associate of General Studies (AGS) through DE credits by Fall 2005.

Students at GBC may complete the requirements for a Bachelor of Applied Science degree through a combination of IAV and Internet based courses, through a DE completion program. However, due to some intermittent scheduling of certain courses, it may take a student longer than two years to complete the degree requirements.

The University of Nevada, Reno is near completion of its third iteration of a distance education cohort Masters of Business Administration in Elko. Each course is delivered in part via IAV, with the instructor traveling to Elko for the off-TV sessions. In this manner, accreditation requirements and program quality issues are addressed while providing maximum convenience to students. The University also offers a Bachelor of Science in Nursing completion program for RNs via WebCT. Courses are offered via WebCT and IAV for students in the Bachelor of General Studies degree program.

DE Courses

The UCCSN institutions are working together to improve access to higher education through DE programs. In recent years the campuses have worked together to create an

online directory of DE courses, where students can scan the available courses from all six institutions at once. The on-line directory is located at www.scsr.nevada.edu/disted/. This online resource showcases the variety of credit and non-credit DE courses from which students may select. Appendix C includes a list of credit and non-credit DE courses offered by campus during the 2001-2002 academic year. This list is intended to provide a sense of services/courses provided, and is not an unduplicated list of courses.

In addition to credit and non-credit DE courses, hybrid or enhanced courses are also offered at each campus. A hybrid course is one in which traditional student/teacher contact in the classroom is augmented with work on the Internet or with interactive video. The following table provides information on the number of hybrid/enhanced courses held during the 2001-2002 academic year.

	Hybrid/Enhanced Courses Held			Number of Students Served (unduplicated)		
	Fall 2001	**Spring 2002**	**TOTAL**	**Fall 2001**	**Spring 2002**	**TOTAL**
CCSN	--	--	300	--	--	9,000
GBC	14	19	33	433	685	1,118
TMCC	10	20	30	325	602	927
UNR	162	141	303	6,158	3,366	9,524
UNLV	--	--	892	--	--	16,304
WNCC	23	21	44	345	252	597

Due to system constraints, UNLV is unable to provide this information by semester, thus totals only are indicated. The numbers provided by CCSN are estimates only, the campus is not able to provided exact figures for each term.

PART III
THE FUTURE OF DISTANCE EDUCATION

NEW AND PROPOSED DISTANCE EDUCATION PROGRAMS

The following discussions of new and proposed distance education programs were provided by each institution's respective DE director:

Community College of Southern Nevada

The growth rate in DE at CCSN has been phenomenal. As the College continues to grow, focus has been placed on meeting the student demand and serving the community. To this end, several collaborations and programs through DE are projected to emerge in the future.

As new programs begin to materialize, the College will be dedicated to coordinating efforts with all of the higher education institutions within the state of Nevada. The goal is to build the current foundation that exists in DE at CCSN and develop a greater array of degrees and certifications online to serve the needs of the students, the community, and the state. To that end, much of the future will focus on students, faculty, staffing, and programs.

Students

Students who have successfully completed distance education courses have higher rates of persistence than their on-site counterparts, thus the focus will be placed on simplifying the initial entry process for new students. To clarify the online entry process for students new to DE, several practices have been set into place and will be refined as we move forward in the next three years.

The measures that will be taken are training counselors, admissions and records staff, lab technicians, secretaries, and help desk personnel in advising new DE students. Streaming online student orientation will be refined and training will include an online boot camp "How to Be Successful" for new students. A key element will also be to create a stronger support structure leading to increased retention. Student services for online students are currently being strengthened and online student union created to build a sense of community in the online environment.

Faculty

To foster the growth of these programs, CCSN will build multiple layers of support for faculty through professional development and training to improve quality in instruction and also to recruit new faculty to DE. We plan to do this by offering a greater array of workshops and training courses for full-time and part-time faculty. Workshop offerings will emphasize current and upcoming teaching technologies, integration into pedagogy, and the laws concerning online courses such as copyright and disability issues. Moreover, CCSN will provide workshops to on-site faculty to enhance in-class instruction and building a bridge to offer the full spectrum of enhanced on-site, hybrid, and complete online courses.

Additionally, all new faculty will be required to participate in and complete a four-week training course. Upon completion of this course they will be officially matched with a mentor to provide support between experienced faculty and new faculty. This will facilitate peer review between mentor and the new faculty member resulting in one more of the evaluation mechanisms designed to improve quality. One more source of professional collaboration and support will be implemented in the online faculty forum that will have an online faculty handbook, chat rooms, message boards and a shared catalog of resources materials.

<u>Staffing</u>

The student growth has gone from 100s of students to several 1000s in this program. As of September 2002, CCSN has 6744 students enrolled in Distance Education; however, the size of the staff to support this infrastructure has not grown. It will be necessary to create new positions to serve the faculty and the students and prepare for the anticipated growth.

Overseeing a program of this magnitude requires the commitment of a Dean or Executive Director. To keep up with the increased demands of technology and maintaining high levels of quality, a Director of Technology is needed who will oversee a Software Specialist, a Media, Audio & Visual Specialist, and Technical Support Helpdesk. A Curriculum Specialist; who is both technologically savvy, but also has an understanding and experience with pedagogy, will oversee a course and web-development professional. To provide general support for the increased student population and clerical tasks, an additional Management Assistant and a student worker will be necessary. In order to properly serve the students these positions will be vital to achieving optimal success.

<u>Programs</u>

Ongoing program development will include the following:

- Title I - Teacher Assistant Certification;
- 2 + 2 bridges between in-state institutions;
- Articulation, 2 +2s with online universities;
- Outreach to community programs and industry; and
- K-12 partnerships within the state.

Expansion of current programs and development of new programs are also on the horizon.

Great Basin College

Great Basin College increased the number of IAV rooms by four in the past year. In addition, the public schools added 11 IAV rooms in their respective school districts. Many of the new IAV rooms are in small communities where GBC previously has not been able to offer classes, but now hope to enroll students. The new IAV rooms will help GBC achieve its mission of bringing the availability of a college education to everyone in our geographic service area.

Students in GBC's service area who are near an IAV site can complete a degree through a combination of IAV and Internet classes. Since not everyone is within easy driving distance to an IAV site, GBC is working towards the offering of a complete AA or AS degree via Internet. We hope to achieve this goal within the next year. The college's computer and office technology department is also actively developing an online AAS degree program with a two-year timeline.

Great Basin College offers a Bachelor of Applied Science (BAS) degree program via IAV courses, making the degree accessible to students in communities with an IAV room. Also, GBC is working with TMCC and the other community colleges to develop a BAS in Fire Science to be delivered at TMCC by Fall 2003.

Great Basin College is partnering with the Peace Officers Standards and Training (POST) program to offer their intermediate and advanced certificate courses via the Internet. The POST program collaborated with GBC last year to have the POST certification tests placed on-line, reducing the travel expenses of POST test proctors.

Over the next year, GBC will develop and offer a series of on-line professional development courses for our part-time faculty. These courses will achieve two goals. First, they will provide GBC's part-time faculty expertise in methods of teaching and assessment. And secondly, faculty's knowledge of the Internet as a teaching medium will increase, providing such instructors with some insight as to what it is like to be a student taking an Internet course.

Truckee Meadows Community College

From its inception, TMCC's web-based instruction and cablecast classes targeted the needs of working Nevadans and students who are homebound (e.g. taking care of small children, lacking transportation, already work from home, etc.). Truckee Meadows Community College's web-based instruction already provides for the opportunity to earn an Associate's Degree (AA) with emphases in Business, Psychology, History, or English. During the next one to three year planning horizon, TMCC will expand the number of emphases available to include Nursing, Public Safety, as well as additional emphases in Liberal Arts and the Humanities.

Further, TMCC will work with UNLV to expand the existing "2+2" partnership to provide more choices for online Bachelor's degrees. The college will also explore possible partnerships with other institutions.

For TMCC's cablecast classes, efforts are underway to secure a 24-hour dedicated educational channel with the local Charter Cable System. With more than 130,000 subscribers, cable delivery of instruction offers unbridled opportunities to make higher education more accessible. The one to three year planning horizon will allow for the development of an Associate's Degree available through cablecast classes as well.

University of Nevada, Las Vegas

As stated in the proposed master plan, *University of Nevada, Las Vegas, The Engaged Research University: Extending the Agenda, 2002-2007*, UNLV will continue to develop instructional programs that are less restricted by time and place than courses and programs delivered by traditional means. The purpose for so doing is to:

- Increase educational access for students unable to attend classes on campus;
- Fully utilize the resources of the university; and
- Enhance instruction by integrating technology into the curriculum.

To this end, the primary focus will be to expand offerings in the Social Science Degree Program. Admissions to this program have increased from 20 to 147 this past year. While the majority of those admitted to the program are on campus, many of them require some distance education classes to make earning the degree viable. And the off-campus students in the program are entirely dependent on distance education classes.

Interest from former UNLV students who previously dropped out of college and now wish to return is expected to increase interest in the DE program. A concerted effort will be made to keep up with the demand and to provide sufficient classes for this purpose. A dialogue between UNLV and the community colleges has begun with respect to collaboration on a "2+2" Social Science Studies Degree program to help meet the growing demand.

There are other disciplines in which there is expressed interest in degree programs. Therefore, UNLV intends to develop sufficient new classes in the following disciplines to support degree programs:

- Criminal Justice,
- Tourism and Convention Administration,
- Special Education,
- Educational Administration,
- Early Childhood Education, and
- Teacher Education.

Additionally, UNLV will continue to develop ad hoc distance education classes to meet specific enrollment management needs. The sustained growth in distance education on the campus makes it apparent that distance education classes are a good tool for enrollment management. The flexibility available for both students and faculty enables the university to maximize efficiency with respect to scheduling the number of sections required for some courses and the facilities required to support these sections.

Finally, UNLV will pursue increased use of the web for academic and administrative functions. The migration of its classroom management software, WebCT, from the Standard Edition to Campus Edition and then to Vista will increase the efficiency of the campus by more thoroughly integrating the academic and the administrative functions of the campus. More importantly, it will make possible evaluative and pedagogical strategies impossible without such software upgrades.

University of Nevada, Reno

In coming years, the University of Nevada, Reno will build upon its 15 years of experience with electronically-delivered DE to further enhance both access to, and the effectiveness of, post-secondary education for citizens of Nevada.

Web-based learning is an increasingly important service for students and faculty at the University of Nevada, Reno. Over the past four years, growth in the use of WebCT has evolved from humble beginnings to become a ubiquitous service for students and faculty. Currently, hundreds of courses at Nevada utilize WebCT, and the tool is available for all instructors who wish to utilize the service. Instructors employ WebCT primarily to enhance face-to-face classes, though an increasing number also use Web-based learning to replace some, if not all, face-to-face classes. WebCT at UNR has matured to a level where some faculty offer completely Web-based classes as standard course offerings through their college. The Orvis School of Nursing uses Web-based learning to offer students a Bachelor of Science degree program completely online. Web-based learning at UNR will enjoy continued growth, and, in the near future, will be a service used to enhance practically every class section. The utility of extended Web learning environments ranges from supplementing standard classes to being the core mode and framework upon which alternative delivery courses are designed.

The Independent Learning Program is rapidly developing Web-based versions of its entire 123-course catalog, including nine courses offered for UNLV credit. Courses support a number of UNR degree programs and include full online minors in Criminal Justice, Basque Studies, and Addiction Counseling and Prevention Services. Nearly 50 courses are presently available on the Internet, with 20 more scheduled to be added annually.

Last year, Washoe County School District ended its high school correspondence study program and is now referring its students to the University of Nevada, Reno's High School Independent Learning Program. This greatly increased participation in these open enrollment courses. The university offers 32 high school Independent Learning courses. It is anticipated that Web-based versions will become available at the rate of approximately eight during each of the coming four years.

After using a couple of Web-based courses last year to work through the administrative adjustments required to offer semester-based WebCT courses, the Independent Learning Program plans to add more semester-based courses to its catalog. This is in keeping with national trends. It is imperative that UNR and other UCCSN institutions continue to embrace, support, and fund Web-based learning, as this learning option has clearly become 'the' extended learning environment worldwide.

Turning to Interactive Video, the University of Nevada, Reno hopes to implement a 3 + 1 Bachelor of Social Work (BSW) degree with Great Basin College. The final year of this program will be delivered via IAV. The university would like to consider

following the BSW program with a Master of Social Work (MSW) program to be delivered via a combination of IAV and WebCT. There is a pressing need for MSWs in northeast Nevada.

Discussions have begun about a fourth round of UNR's popular MBA cohort program, possibly adding an IAV site to form a Carson/Douglas group in addition to the Elko group.

And finally, fifteen years of experience administering and delivering electronic distance education across northern Nevada was put to the test – and passed with flying colors – with implementation in Fall 2002 of the University of Nevada, Reno's portion of the $26.1 million Nevada Reading Excellence Act Program (NREA). Among the requirements of the grant is for the University of Nevada, Reno College of Education to deliver a Masters in Elementary Education (emphasis in Literacy) to K-3 teachers at 21 participating northern Nevada elementary schools. A combination of technologies is being used. Approximately half of each course in the degree program will meet over IAV delivered to 172 teachers at twelve sites (Elko, Fallon, Fernley, Gardnerville, Jackpot, Lovelock, Minden, Reno, Sparks, West Wendover, Winnemucca and Yerington). Remaining course meetings are at the local school sites where instruction will include a variety of WebCT components. Teachers will complete their master's degrees in Fall 2005. Implementation of this program in northern Nevada would not be possible without the IAV network and WebCT.

Western Nevada Community College

Since opening it doors in 1971, WNCC has been dedicated to providing a wide range of educational opportunities to the people of Western Nevada. Campuses in Carson City, Fallon, and Minden, as well as seven instructional centers located throughout the college's seven-county, 18,000 square mile service area, offer a diverse curriculum which is flexible and tailored to meet individual needs.

To provide educational services in the rural areas of the vast WNCC service area, the college began offering courses via IAV in 1993. Web instruction was introduced in 1998. This mode of course delivery not only gave rural students additional educational opportunities; it assisted those who were homebound to obtain a post-secondary education.

Over the next three years, WNCC will continue to enhance degree course offerings and provide student access. This will be accomplished by achieving the following:

- Strengthen the academic integrity and testing methodology for Web-based instruction.
- Emphasize faculty and curriculum development of Web-based instruction and the utilization of technology to strengthen the traditional classroom.

- Improve coordination of IAV scheduling among campuses and centers to increase the success of offering degree required courses on a regular basis.
- More fully utilize telecourses to reach potential homebound students by partnering with local cable access television stations.
- Through maximizing the use of Web-based courses, offer two full degree programs through web-based instruction (AGS, AA).
- Explore the feasibility of offering occupational degree and certificate programs exclusively through distance education.
- Explore state, federal and private funding to replace IAV equipment, provide Web and IAV faculty development, and increase distance education curriculum development.
- Monitor and improve course retention in all distance education technologies (interactive video, web-based, telecourses).

Desert Research Institute (DRI)

In future years, DRI would like to build on its experience using IAV for instruction of graduate level courses in hydrology in partnership with UNR and UNLV. Interactive video has been used by DRI in the past to offer special classes in hydrology and increase the overall efficiency of DRI teaching by providing developed class materials to more students. In addition, IAV may permit DRI faculty to present classes on special topics to students at Nevada State College at Henderson as well as UCCSN community colleges. DRI also will explore opportunities to use interactive video in the Atmospheric Sciences Graduate Program, a cooperative effort between DRI and UNR, as well as K-12 educational programs. The UCCSN has the required equipment, and DRI faculty have experience in utilizing this educational format.

APPENDIX A

Report on the
University of Nevada Cooperative Extension Program

Provided by the Office of
Academic Credit Programs Continuing Education
UNR

Distance Education Report
University of Nevada Cooperative Extension
July 2002

University of Nevada Cooperative Extension (UNCE) takes knowledge from the University of Nevada and puts it to work in homes, workplaces and communities. Some of our faculty work on campus, but most live and work in communities statewide. Non-degree educational programs are delivered in all 17 Nevada counties based on local needs assessments. Cooperative Extension's purpose, as stated in the *Nevada Revised Statutes* (NRS 549.010), is to "conduct educational, research, outreach and service programs pertaining to agriculture, community development, health and nutrition, horticulture, personal and family development, and natural resources in the rural and urban communities of Nevada."

In today's high-tech world, a learning atmosphere can be anywhere you want it to be – a college classroom, a learning center in your community or home at your own computer. UNCE's statewide use of live, interactive videoconferencing for educational programs and planning meetings increased more than 30 percent in 2001. These community learning centers help instructors and participants save travel time and dollars. Technologies such as compressed video and the Internet are extremely effective at reaching isolated rural communities, as well as maximizing resources in urban settings.

"Compressed video allows citizens to increase their knowledge and skills without having to travel far from home," says Meggin McIntosh, Director of UNR's Excellence in Teaching Program. "Participants also hear ideas from other people who don't 'live down the street.'"

> Here are just a few examples of successful 2001 videoconferences:
> - Nutritionists in five states focused on educational strategies in a two-day training conducted by UNCE's Madeleine Sigman-Grant that resulted in improved knowledge, awareness, motivation and skills.
> - More than 100 cattle producers at five sites learned how to economically improve the reproductive efficiency of their herds in a course taught by UNCE's Ron Torell and other university instructors.

"The use of this technology allows educators to react quickly to emerging issues," Torell points out, "such as a disease outbreak during calving. In this instance, we would connect ranchers with our state veterinarian."

Youth, too, benefit from the educational adaptation of new technologies. Experts indicate today's youth use the Internet as their main source of communication. UNCE's Marilyn Smith uses high-speed Internet access as the primary educational delivery method in after-school programming at the Duck Valley Indian Reservation. Smith obtained outside funding for a computer center to help ease young people's feelings of isolation. A group of teens is training to teach seniors how to use the Internet as well.

Forms of Distance Education

Through the **Internet**, UNCE's web site offers curriculum and teaching modules such as *Child Abuse and Neglect and Strengthening Families*, as well as Fact Sheets and Special Publications, such as the *Tahoe Landscape Guide* and *Small Ranch Manual.* Television stations link to the site for publications such as *Living with Fire*. Cooperative Extension's Web page receives an average of 8,000 to 10,000 hits per month.

E-mail is used to provide subject matter information to individuals as in the "Coffee Shop," where cattle producers ask and receive information regarding animal reproduction, management and other topics. More than 100 individuals subscribe to this program. Additionally, citizens' questions are often answered through e-mail, especially those related to gardening and landscaping.

Satellite receivers in 16 offices provide the capacity to downlink both analog and digital signals and to access programs that are used for both public education and staff training.

Compressed video offers an opportunity for participants to interact through trainings, conferences, workshops and meetings. This interactive teaching tool provides real-time instruction at as many as eight sites statewide at once. Approximately 2,800 individual contacts were made using compressed video from January through June of 2002. This translates to an estimated yearly contact figure of approximately 5,600 using this technology. The following list shows examples of classes and meetings for the first six months of 2002:

Programs and Meetings Delivered Via Compressed Video (Jan. – June, 2002)

Governor's Sage Grouse Task Force
State 4-H Camp Advisory Council
Market Steers
Strategic Planning Forum with
  President Lilley
Conference Planning Committee
Selecting & Feeding 4-H Market Swine
4-H Statewide Staff Meeting
Child Care Training
UNCE/NAES Joint Planning Meeting
4-H Centennial Committee
Fiscal Training
Extension Governing Board
Nutrition Team Partners
Teacher Training
Energy Committee
Policies & Procedures Committee

Nevada Shade Tree Council
Administrative Meetings
4-H Statewide Staff
Brown Bag Discussions
4-H State Dog Rules Committee
4-H Ambassadors
4-H Horse Committee
4-H Expo
Integrated Pest Management
    Advisory Board
State Master Gardeners
Eastern Nevada Landscape Coalition
Urban Integrated Pest Management
Weed Warriors
Living with Fire Committee
Nevada Fire Safe Council
Kids Count
Pesticide Applicator Training
4-H Plus Training
4-H Survey
Riparian PFC Cadre
University Center for Economic Development
Nevada Veterinary Medical Association
Landscape Management Training for Latinos
NDOT Weed Project
Family Storyteller/Prison Literacy
Tall Whitetop Task Force
Board of Directors-NV Veterinary Medicine Association
Indian Summit Planning Committee
Nevada Checkup-Child Care Training
Project Magic
4-H Market Hog
4-H Market Sheep
Reproductive Management for Beef Cows
Small Business Development Center
Water Operators Workshop
Child Abuse & Neglect Training
Economic Development Committee
NNTC Governance Board
Governor's Task Force on Alternative Fuels
Family Resource Center
NNPPDP Mentoring
4-H Shooting Sports Leaders
Master Gardener Class
Mail Handling Training
Web Policies

Eureka County School District Board of Trustees
Eureka County School District Fiscal Committee
Eureka County School District Math Training
Eureka County School District Educational & Evaluation Programs
Eureka EMS Certifications of volunteers
Eureka Economic Development Program
Nevada WIC Nutrition Educators Conference

Compressed Video Sites Utilized for UNCE Programs and Meetings

Cooperative Extension Offices – Carson City, Eureka, Las Vegas (Red Rock and Lindell
        buildings), Pahrump, Winnemucca, and Reno
University of Nevada School of Medicine – Elko, Ely, Lovelock, Yerington
Lincoln County School District– Caliente Elementary School
Nye County School District Administration – Tonopah
White Pine High School - Ely
System Computing Services – Las Vegas, SCS 304
University of Nevada Reno – Getchell Library, Room 9
Community College of Southern Nevada – Las Vegas at CCSN Cheyenne
Great Basin College – Elko
Western Nevada Community College - Fallon, Lovelock, Yerington

Examples of Partners in Distance Education Programming

Nevada Division of Wildlife
Nevada Department of Transportation
State Department of Agriculture
Nevada Community Colleges
University of Nevada School of Medicine
UNR Extended Studies
Nevada County Governments
Nevada School Districts
Cattlemen's Association
Nevada Farm Bureau
Nevada Bureau of Health Protection Services
Nevada Division of Environmental Protection
USEPA, Region 9
Rural Community Assistance Corporation
Truckee Meadows Water Authority
Sun Valley General Improvement District
NV Rural Water Association
California/Nevada Section of American Waterworks Association

Ongoing Expansion of Sites

In the Spring of 2002, UNCE applied for a Rural Utilities Distance Learning Technology Grant. If funded, this would expand compressed video capabilities to UNCE offices in Gardnerville, Fallon, Yerington, Lovelock and Tonopah. A decision on the grant is still pending.

APPENDIX B

Report on the
University of Nevada, School of Medicine
Distance Education Programs

Provided by the Office of
Academic Credit Programs Continuing Education
UNR

Distance Education Report
University of Nevada, School of Medicine
July 2002

Overview and Programs

The School of Medicine's Center for Education and Health Services Outreach (CEHSO) is home to the school's outreach programs and activities. The purpose of the Outreach Office and its programs is to: 1. strengthen rural and urban underserved health care; 2. recruitment and retention of health care professionals; 3. provide access to learning resources; 4. provide continuing education opportunities to rural and underserved health care providers; 5. recruitment of rural and urban elementary students, junior high students and high school students into health careers; and 6. serve as a bridge between the academic medical environment and the community. The programs accomplishing these activities are housed in the Outreach Office. These programs are the Nevada State Office of Rural Health, Nevada Area Health Education Centers, Nevada Geriatric Education Center, AIDS Education and Training Center and The Office of Continuing Medical Education. The major programs provide both on-site and distance learning opportunities. The Office has staff in Reno, Elko and Las Vegas.

The Nevada Area Health Education Centers have been involved in distance education since their beginning in 1988. In the early days the staff of the Centers would work with rural health care providers to identify needs and provide instructors on-site to address educational needs and issues. Delivery of distance education in this format was provided to larger rural communities 3-4 times per year and to smaller communities 1-2 times per year. Finding urban instructors willing to travel for a day or more to teach a 3-5 hour class was often extremely difficult.

With the advent of distance education the programs of the School of Medicine were able to offer timely and targeted educational programs, conduct statewide meetings, provide technical assistance on issues and even provide medical consultations to patients and health care professionals with urban-based specialists. Course and meeting offerings to rural Nevada have increased from 3-4 a year to several times a week. Compressed video and Internet access has been installed into each rural hospital in the state. In addition for smaller communities compressed video and Internet access have been installed into medical clinics. These hospitals and clinics have not only become the hub for medical related issues but have also become the hub for College and University Courses offered in the communities.

Highlights of Distance Education Development and Projects

Third Year Practice of Medicine Clerkship and Statewide Meetings

The School of Medicine utilizes compressed video to conduct meetings between sites in Reno, Las Vegas and Elko. The system is heavily utilized by the Dean, Chairman and committees for business. In addition, the School of Medicine utilizes the compressed video system for a 20-week third year clinical rotation. Students spend those 20 weeks training with Adjunct clinical faculty in Elko and attend classes with students located in Las Vegas and Reno.

Digital Divide Project

The School of Medicine just completed a $1 million project funded by the Federal Office for the Advancement of Telehealth. The purpose of this project was to conduct comprehensive technology assessment for the smallest of Nevada communities and to implement those plans in 3-6 of those communities. These technology plans addressed not only health care, but education and library access. As a result of this project the School of Medicine completed those assessments and is providing technology funding for the communities of Austin, Amargosa Valley, Round Mountain, Owyhee and West Wendover. The community of Owyhee is an excellent example of the partnership with the School of Medicine and technology. Funding for this project came from the Tribal Council, Digital Divide, University Extension, University of Washington (Gates Foundation) and Elko County School District. As a result, a community that was isolated from technology now has high speed internet access and video access at the high school and hospital.

Video Usage

From September 1, 2001 through June 31, 2002, 1485 people attended 86 classes and 185 statewide meetings for 595 total hours of usage. The classes that people attended ranged in topics from Bio-terrorism Training to Obstetrical Updates. The meetings range from fiscal technical assistance with rural hospitals to statewide quality assurance trainings. It should be noted that the School of Medicine offers courses and meetings throughout the year and also these statistics are rural trainings only and do not include activities between Reno and Las Vegas. Compressed Video Topics for September 1, - June 30, 2001.

> ADHD
> Advances in Screening Alzheimer's
> An International Perspective on Infectious Disease
> Anthrax
> Anthrax--2 classes
> Artificial Reproductive Technology
> Back to Beta Blockers

Bio-terrorism Class
Cardiology Update
Changing Concepts in HIV Therapeutics
Chemotherapy Certification
Clinical Breast Exam: Proficiency & Risk Mgt
Communicating with the Elderly
Covering Kids Rural Coalition
Death, Dying and Grieving Process
Diagnosis & Management of Diabetes Mellitus
Elder Abuse and Exploitation
EMS Basic and Intermediate Certification
From Macrolides to Ketolides
Functional Assessment of the Elderly
Hospice Conference
ID, Assessment & Treatment Issues of Abused Children
Lady with Lytic Bone Lesions
MEDEX Orientation
Mental Health Issues
Mental Health Issues
Mgt of Childhood & Adolescent Disorders (ADHD)
New Directions in Protecting Renal Function...
Nutritional Issues in the Care of Immune Compromised Pts.
Peculiar Neurologic Symptoms in Gold Miners
Promoting Healthy Aging
Psychology of Aging
Smallpox: What Every Clinician Should Know
Sociology of Aging
Suicide Prevention
The Challenge of Lipid Management
The Epidemic of Obesity
Update on Colorectal Cancer

Internet Access

Internet access allows health care professionals direct access to resources on a national and local level. Most rural hospitals and clinics do not have access to current journals and periodicals and so the Internet has provided linkage for quick access to current literature for the treatment of cases.

Medical Consultations and Telemedicine

In addition the digital technology based at the rural and urban hospitals has also allowed for medical consultations, radiology image transfers and other applications to support and improve the health care status of rural and urban underserved Nevada.

Special Topics and Needs

Homeland Security

With the tragedy of September 11, increased focus has been pointed towards the training and coordination of issues relating to homeland security and bio-terrorism. The University of Nevada, School of Medicine has provided statewide training to health professionals and volunteers throughout the State of Nevada. In the new proposals by the State of Nevada, the School of Medicine and the University of Nevada, Reno sites play a major role in the effort to train and organize Nevada to respond to the new and emerging threats of terrorism.

Emergency Medical Services

In addition to the above topics the Office of Rural Health and AHEC program have also been focusing on special topics.

In March, 2000, the Office of Rural Health was awarded a grant from the Federal Office of Rural Health Policy to assist small rural hospitals for conversion from Prospective Payment to Cost Based Reimbursement. The purpose of this project was to increase the fiscal viability of small rural hospitals in fiscal crisis. Compressed video has played a major role in the implementation and success of this project. Statewide meetings, trainings, fiscal meetings, technical assistance, as well as target programs, have utilized distance technology to successfully assist all small rural hospitals and to strengthen the long-term fiscal outlook. In addition to the fiscal impact, this program is also looking specifically at telemedicine development and the support of a fragile Emergency Medical System. When the EMS training program began in 2000, several small volunteer EMS services were in jeopardy. Because of the volunteer nature of the services, people are required in many instances to leave their communities and travel to become certified and to remain certified. The services were running out of staff and in jeopardy of closing. In conjunction with the State EMS Office, a targeted project was established to train and upgrade skills to the hundreds of volunteers maintaining EMS services throughout Nevada. The following is a list of topics and attendees for this program.

Topic	Number of Attendees
	20
PALS/EMS-C	
Public Safety Summit	39
EMT Intermediate	31
EMT-B Refresher	11
EMS Billing Solutions	86
Shock	73

Crime Scene Prevention	76
The Neurological Patient	22
The Neurological Patient	43
Wilderness Medicine	57
Cardiac Assessment	28
BTLS	7
Patient Assessment	34
Burns & Amputations	30
First Aid for Baby Sitters	23
Burns & Amputations	32
Behavioral Emergencies	26
EMT Basic Class	48
Let's Get Healthy	50
Intro To Club Drugs	27
Bioterrorism Class	50
CPR Cert. Class for Elko	10
OB Emergencies	30
Emergency Driving	68
EMT Intermediate Class	48
Ground Zero	17
Pearls of Pediatrics	57
Tricks of the Trade-IVs	36
Pearls of Pediatrics Pt. 2	42
Bioterrorism-Awareness/Ops	71

Compressed Video Sites Developed and Maintained by the School of Medicine

UNSOM Battle Mountain (2 rooms)
Battle Mountain General Hospital
UNSOM Caliente
Grover C. Dils Medical Center
UNSOM Carson City (2 rooms)
Carson Tahoe Hospital
UNSOM Elko (2 sites)
Northeast Nevada Regional Hospital
Great Basin College
UNSOM Ely (2 rooms)
William Bee Ririe Hospital
UNSOM Eureka
Eureka Medical Clinic
UNSOM Hawthorne
Mount Grant General Hospital
UNSOM Lovelock
Pershing General Hospital
UNSOM Las Vegas (2 sites)

Patient Care Center
Dean's Conference Room
UNSOM Owyhee
Owyhee Community Health Facility
UNSOM Reno (7 sites)
Nelson Building-room 206 & 230
Pennington Building-room 16, 20, 114
Jones Conference Room
Family Medicine Center
UNSOM Sparks
Northern Nevada Medical Center
UNSOM Tonopah
Nye Regional Medical Center
UNSOM Winnemucca
Humboldt General Hospital
UNSOM Yerington (2 rooms)
South Lyon Medical Center

Sample of Partners for Distance Education

Access Air
American Med Flight
Community College of Southern Nevada
Community of Owyhee
Great Basin College
Nevada Cooperative Extension
Nevada Emergency Medical Association
Nevada Health Centers
Nevada Hospital Association
Nevada State EMS
Nevada State Health Division
Northeastern Nevada Regional Hospital
Northern Nevada Regional Medical Center
REMSA
Twenty plus Nevada Rural Nevada Hospitals and Health Centers
Washoe Medical Center and Health System
Western Nevada Community College

Expansion of Sites

The School of Medicine will be installing sites in Austin, West Wendover, Amargosa Valley and Round Mountain in the coming year.

APPENDIX C

CREDIT AND NON-CREDIT
DISTANCE EDUCATION COURSES HELD
(Fall 2001 and Spring 2002)

Compiled by
Office of Academic and Student Affairs
University and Community College System of Nevada
on behalf of each UCCSN institution

CREDIT DISTANCE EDUCATION COURSES

Following are the pure DE credit courses delivered by each respective UCCSN campus during the 2001-2002 academic year (Fall 2001 and Spring 2002).

Community College of Southern Nevada

A+ Software
Access Certification Preparation
Advanced Language of Medicine
Advanced Language of Medicine
Advanced UNIX Operating System
Advanced UNIX
   System Administration
Animal Disease Pathology
Animal Nutrition
Art Appreciation
Basic Writing II
Basics of Mathematics
Calculus II
Clinical Lab Procedures
Clinical Practicum III
College Algebra
Composition for International
   Students
Composition I
Composition II
Computer Illustration I
Conduit Bending & Installation
Contemporary Literature
Contemporary Social Issues
Creative Writing
Current Procedural Terminology
Diagnostic Imaging
Educational Psychology
Electrical Control Equipment
Electrical Print Reading
Electrical/Electronic Test
   Equipment
Electrical/Electronic Theory
Elementary Accounting I
Elementary Accounting II

Elementary Algebra
Elementary School Mathematics I
Elementary School Mathematics II
Environment Computer
   Application
Essentials in Fire Fighting
Ethnic Groups in Contemporary
   Societies
Excel Certification Preparation
Exercise, Nutrition and
   Weight Control
Finite Mathematics
First Year Spanish I
Fundamentals of College
   Mathematics
General Psychology
Health Care Law
Intermediate Algebra
Introduction to Interpersonal
   Communications
Introduction to Computer Graphics
Introduction to Elementary
   Education
Introduction to Hotel, Restaurant
   and Casino Management
Introduction to Marriage
   and Family
Introduction to Occupational and
   Physical Therapy
Introduction to the Human Body
Introduction to UNIX Operating
   System
Introduction to American Politics
Introduction to American Politics
Introduction to Business

Introduction to Drama
Introduction to ICD-9-CM
Introduction to Management
    Information Systems
Introduction to Marketing
Introduction to Poetry
Introduction to Programming
Introduction to Short Story
Introduction to Special Education
Introduction to World Literature I
Jazz Appreciation
Keyboarding/Typing I
Lab Science
Laboratory Procedure for
    Veterinary Technicians
Language of Medicine
Large Animal Procedures
Man and the Environment
Medical Terminology I
Methods of Social Control
Management of the Incident
    Command System
Microcomputer Accounting System
Microsoft Project Certification
    Preparation
Music Appreciation
Networking Essentials
Nevada History
Nevada School Law
Nursing & Management Procedures
Observational Astronomy
Ocular Anatomy and Physiology
Opthalmic Optics I
OSHA Refresher Training
Pathophysiology I
PC Maintenance and Configuration
Phlebotomy
PowerPoint

Pre Algebra
Precalculus I
Precalculus II
Preparatory Biology
Preparatory Chemistry
Principles of Sociology
Psychology of Personal and
    Social Adjustment
Qualitative Research Methods
Reasoning and Critical Thinking
Research on the Internet
Role of the Technician
Sociology of Deviance
Stars and Galaxies
Structure & Organization of
    Health Information. Systems
Study Skills for College
Surgery & Dental Procedures &
    Anesthesia
Surgery & Dental Procedures &
    Anesthesia (Lab)
Survey of American Literature I
Survey of American Literature II
Survey of Computer Uses
    in Education
Technical Communications I
The Solar System
Troubleshooting Skills
UNIX System Administration
Urban-Wildland Fire Operations
US History I
US History II
User Support Skills and
    Technology
Valuing Cultural Diversity
Veterinary Medical Terminology
Word Certification Preparation

Great Basin College

Advanced Literary Study
Applied Accounting & Finance
Appreciation of Theater
Basic Mathematics
Basic Programming I
Basic Writing
Bookkeeping I
Business Law I
Calculus I
Calculus II
Calculus III
Capstone Seminar
Capstone Seminar
Child Abuse/Neglect
Children's Literature
Composition I
Composition II
Composition III
Criminal Justice Organization
Criminal Procedures
Critical Thinking
Current Procedural Terminology
Economic Issues
Education Seminar I
Education Seminar II
Elementary Accounting I
Elementary Accounting II
Elementary Algebra
Elementary Concepts of Chemistry
Emergency Medical
   Technician Intermediate
Emergency Medical Technician
   Training
Executive Office Procedures
Exploring the Internet
Fundamentals of College Math
Fundamentals of GIS
Fundamentals of Speech I
General Biology I
General Psychology
Health and Nutrition for Children

Historical Geology
History of Rock Music
Human Resource Management
Humans and the Environment
Indians of North America
Individual and the Family
Infectious Disease/First Aid
Integrative Humanities Seminar
Integrative Mathematics Seminar
Intermediate Algebra
Intermediate Spreadsheets
Intermediate Word Processing
Integrative Science Seminar
Integrative Social Science Seminar
Introduction to Business
Introduction to Computer
   Applications
Introduction to Digital Photography
Introduction to ICD-9-CM Coding
Introduction to Literary Study
Introduction to Marketing
Introduction to Mass
   Communication
Introduction to Microsoft Word
Introduction to Physical Evidence
Introduction to Social Work
Issues in American Public Policy
Juvenile Delinquency
Language Study
Math Systems Applied to
   Technology
Medical Terminology
Microcomputers in Business
Music Fundamentals
Nevada School Law
Number Concepts for Elementary
   School Teachers
Parent/Caregiver Relationships
Personal Finance
Police in America
Precalculus I

Great Basin College - continued

Precalculus II
Preschool Curriculum
Prevention & Control of
  Delinquency
Principles & Practices of
  Preschool & Child Care
  Organization & Administration
Principles of Child Guidance
Principles of Ecology
Principles of Investigation
Principles of Macroeconomics
Principles of Nutrition
Principles of Sales
Probation and Parole I
Professional Communications
Psychology of Human Relations
Real Estate Law/Practice
Real Estate Principles I
Religion in American Life
Role of Play for Children
Science/Engineering Technology
Small Business Management
Special Topic: Apprenticeship &
  Quality Early Childhood
  Programs
Special Topic: E-Commerce

Special Topic: International
  Finance
Special Topic: Introduction to
  E-Commerce
Special Topic: Employment Skills
  Training
Special Topic: Programming
  in C++
Statistical & Geometrical Concepts
  for Elementary School Teachers
Student Leadership
Survey of Philosophy
Technical Communications I
Technical Communications II
Technical Mathematics
Technology/Media in Education
The Exceptional Child
Themes of Literature
Typing I/Keyboarding
Typing II/Intermediate
  Keyboarding
U.S. History I
U.S. History II
Vocabulary and Meaning
Web Page Building

Truckee Meadows Community College

Aging/Modern American Sociology
American Experience &
  Constitutional Change
Applied Business Mathematics
Art Appreciation
Building Construction/Fire
  Protection
Business Letters & Reports
CCNA I (CISCO Networking
  Academy)
Child Psychology
Composition I

Composition II
Computer Literacy
Criminal Law & Procedures
Crnt Top Network: Novell
Elementary Algebra
European Civilization I
European Civilization II
Film and Literature
Food Service Sanitation
Foundations of Western Culture
Fundamentals of College
  Mathematics

Truckee Meadows Community College - continued

Fundamentals of Para-legalism
General Biology
General Physics I
General Physics II
General Psychology
Health Occupations
Human Sexuality
Humans & the Environment
Introduction to Astronomy –
   Stars/Galaxies
Intermediate Algebra
Introduction to Management
   Information Systems
Introduction to Abnormal
   Psychology
Introduction to Accounting I
Introduction to Accounting II
Introduction to Anthropology
Introduction to Criminal Justice II
Introduction to Criminal Justice
Introduction to Industrial
   Electronics
Introduction to Secondary
   Education
Introduction to Statistics
Lifespan Human Development
Medical Terminology
Music Appreciation

Network Support: Novell
Pre-Calculus I
Principles of Sociology
Principles of American
   Constitutional Government
Principles of Microeconomics
Probate, Trust & Guardian
Psychology of Personal & Social
   Adjustment
Reading & Interpreting
Real Estate Law and Practice
Real Estate Principles
Research Methods in Criminal
   Justice
RN Refresher Course
Social Psychology
Supervision/Management
The Modern World
Theater: Cultural Context
Themes of Literature
US History I
US History II
US Involvement/Vietnam
World Literature I
World Literature II
World Politics

University of Nevada, Las Vegas

Abnormal Psychology
African American Survey I
African American Survey II
American Environmental History
Anthropology of Men and Women
Art in Context
Assistive Technology Assessment
Business Writing
Collaborative Services in
   Assistive Technology
Communication Programming

Composition I for
   International Students
Computers in Libraries
Dance Appreciation
Development: Infancy and
   Childhood
Educational Career and
   Personal Development
Elementary Composition
Employee Appraisal and Evaluation

Financial Analysis for the
  Service Industries
Gaming Device Management
General Psychology
Global Economics
History of American Art
Hospitality Accounting I
Hospitality Service Management
Human Behavior and the Social
  Environment I
Humans and the Environment
Independent Study and Research
Integrating Computer-Based
  Tech in Teaching and Education
Internet for Educators
Introduction to Convention Industry
Introduction to Cultural
  Anthropology
Introduction to Management of
  Information
Introduction to Philosophy
Introduction to the Casino
Introduction to Elementary/
  Secondary Education
Introduction to Hospitality
Introduction to Social Work
Introduction to the Short Story
Latin I
Latin II
Literacy Connections
Mass Media and American Politics
Meeting Planning
Methods of Teaching Computer
Applications
Multicultural Perspectives in
Special Education

Mythology
Nevada Constitution
Nevada School Law
Operations Analysis
Overview of Assistive
Technology
Primary Care of the Family I
Principles of Modern Grammar
Promotion Management in the
Hospitality Industry
Psychology of Aging
Reasoning and Critical Thinking
Scholarly Inquiry III:
  Communication and Utilization
School Law (BATE Program)
Soil Dynamics and Earthquake
  Engineering
Special Problems: Teaching
  Phonics and Word Recognition
  Strategies
Special Topics: Professional
  Development
Statistical Methods in Psychology
Survey of British Literature I
Survey of Computer Uses in
  Elementary Education
TESL Emphasis: Inst. for
  Language diversity
The Computer in the Library
  Setting
Topics in American Politics:
  The Politics of Abortion
Variable titles
Western Civilization Since 1648
World Literature I

University of Nevada, Reno

Administration of the
  School Library
Advanced Generalist Practice:
  Individuals & Families
Advanced Studies in Human
  Development: Adolescence
American Literature and Culture:
  Us Against Them
Basque Culture
Basque Diaspora Studies
Basque Economy from
  Industrialization to Globalization
Bilbao Guggenheim Museum
Catering Operations and Sales
Changing Environments
  of Business
Classroom Management in
  21st Century Classrooms
Composition II
Computers and Society
Conduction Heat Transfer
Creative Methods for Teaching ESL
Creative Writing
Developing a Teaching Portfolio
Disability: Social and Health Issues
Education of the Exceptional Child
Elementary Basque I
Elementary Basque II
England and the British Empire I
England and the British Empire II
Essentials in Nursing Research
European Civilization
FAS Students in the Classroom
Foundations of Professional
  Practice RN (Registered Nurse)
Foundations of Western Culture
Geotechnical Earthquake
  Engineering
Geotechnical Engineering:
  Retaining Structures
Health Promotion: Practice RN
Health Promotion: Theory

How is America Defined
  thru Literature?
Human Care Nursing II:
  Practice RN
Human Nutrition
Individual in Society
Introduction to Business
Introduction to Communication
Introduction to Criminal Justice
Introduction to Criminal Justice II
Introduction to Social Work
Managing Computer-Based
  Information Resource Systems
Modern Basque History
Museums, Architecture, City
  Renewal: The Bilbao
  Guggenheim
Music Appreciation
Nevada School Law and
  Constitution
Nursing Management/Leadership:
  Theory RN
Nursing Management/Leadership:
  Practicum RN
Organization & Supervision of
  Literacy Programs
Organizational Theory
Political Violence and Terrorism
Principles of Marketing
Research Methods
Seminar in Control Issues
Seminar in Management Issues
Special Education Law
Special Topics in Nursing:
  Curriculum Development
  in Nursing
Struggle for Justice
Supervision & Evaluation of
  Teaching
The Modern World
Theories of Second Language
Acquisition
U.S. Constitution for Teachers

Western Nevada Community College

Art Appreciation
Basic Writing III
Beginning Word Processing
Business Letter & Reports
Business Law I
Business Mathematics
Calculus I
Calculus II
Childbearing/Childrearing
Clinical Nursing Lifespan
Comp Literacy Software
Composition I
Composition II
Computer Science I
Educational Experience I
Elements of Anatomy & Physiology
Employment Specialist Training
EMS Instructor
Engineering Physics I
Financial Accounting
First Year Spanish I
Foundations Nursing Science
Foundations Pharmacology in
  Nursing
Foundations Western Culture
Fundamentals of College
  Mathematics
Fundamentals of Paralegalism
General Biology I
General Chemistry I
General Microbiology
General Psychology
Geology: Principles & Applications
Health Assessment
Infect Diseases & First Aid
Intermediate Word Processing
Introduction to Business

Introduction to Computer
  Information Systems
Introduction to Humanities
Introduction to Internet
Italian, Conversation I
Italian, Conversation III
Judeo-Christian Tradition
Language System Management
Law Procedure-Civil
Leadership & Human Relations
Managerial Accounting
Microcomputer Account
Microcomputers in Business
Music Appreciation
Nevada History
Organizational Behavior
PC Operations
Personnel Administration
Physical Geography
Precalculus Math II
Precalculus Mathematics I
Principles of Macroeconomics
Principles of Management
Principles of Microeconomics
Principles of Nutrition
Principles of Sociology
Principles of Genetics
Special Topics in Biology
Survey of American Const History
The Modern World
Theory Sys Ana/Design
Transitions to Practical Nursing
U.S. Involvement in Vietnam
Web Design Using HTML
Web Page Design
World Literature II
World Religions

NON-CREDIT DISTANCE EDUCATION COURSES

In addition to the aforementioned credit-bearing DE courses, UCCSN campuses also offer a variety of non-credit DE courses. Following are the pure DE courses held during the 2001-2002 school year at respective campuses that are non-credit bearing courses.

Community College of Southern Nevada

"Ed-2-Go"

Great Basin Community College

Customer Service/Medical

Truckee Meadows Community College

"Ed-2-Go"

University of Nevada, Las Vegas

The University of Nevada, Las Vegas, during the 2001-2002 academic year did not offer non-credit DE courses.

University of Nevada, Reno

Advanced Management Program
Mucus Clearance in Airways
New Student Orientation
Notre Dame STEP Program
Physics Research and Development
Strength Characterization of Clay for Geotechnical Applications
Water Operators

Western Nevada Community College

APICS Workshop

APPENDIX D

ENROLLMENT DATA FOR
STAND ALONE OR PURE DISTANCE EDUCATION
(1997-98 to 2001-02)

Compiled by
Office of Academic and Student Affairs
University and Community College System of Nevada
on behalf of each UCCSN institution