

**Engelstad School of Health Sciences  
Academic Program Review  
Dean Report**

**Introduction**

The Engelstad School of Health Sciences (ESHS) is home to 78 full-time instructional faculty, 85 part-time faculty, 5 administrative faculty, and 15 classified staff. Per Fall 2013 final data, there were 2,279 unduplicated majors and 4,388 unduplicated pre-professional program students enrolled. There are a total of 2 Baccalaureate Degree, 12 Associate Degree, 8 Certificate of Achievement, and 10 Certificate of Completion programs distributed over three Departments: Dental Sciences, Diagnostic Evaluation, and Rehabilitation Services; Health-Related Professions; and Nursing. All of the Degree programs and most of the Certificate of Achievement programs are Limited Entry, requiring a separate application process, attendance at a Health Programs Orientation, and compliance with specific selection criteria. Certificate of Completion programs are Open Entry.

**School Strategic Plan**

The Engelstad School of Health Sciences has a Strategic Plan, which is reviewed and revised annually (please see attached). The Plan includes the School's Vision and Mission statements, as well as the Core Values. The Plan's Goals and Objectives are based on the College's four Core Themes: Access, Student Success, Quality, and Diversity. The Plan is presented to School faculty and staff each Fall, with progress reports related to goal achievement provided throughout the academic year.

**Office of Institutional Effectiveness Data**

Data to support the Academic Program Review process were provided by the Office of Institutional Research. These data included information about duplicated headcount; FTE generated; total number of courses/sections offered; and overall, average section size, capacity, and fullness. Additional data was provided pertaining to retention and success rates, as well as staffing numbers.

Most program directors reported discrepancies between the provided data and actual enrollees for the Fall 2012 reporting period. This was partly related to the large number of self-declared majors who never entered the respective program. Difficulty in accurately interpreting data was also due to the numerous program codes assigned to each program from 2009 to 2012.

**Staffing Information**

Of the current full-time faculty, 27 have achieved tenure status, 23 are non-tenured tenure track, 28 are market-hires, and 5 are temporary full-time hires. There are currently searches in progress to fill positions in Nursing (3 faculty/1 Director of Nursing); Emergency Medical Services (3 faculty); and Dental Hygiene (1 faculty). Since the prior reporting period we have been able to hire a permanent faculty member/program director for the Surgical

Technology, Pharmacy Technician, and Medical Office Assisting programs. These programs had been administered for several years by temporary full-time hires. We have hired a Director of Health Programs Advising and Limited Entry, which is a new position. We also replaced the Program Director for Cardiorespiratory Sciences.

Recruitment of both full and part-time faculty continues to be a challenge for many programs. The inability to offer a salary comparable to wages available in clinical practice is the main obstacle in recruiting full-time faculty. We are also experiencing competition from private institutions which are able to offer higher salaries to faculty. With respect to hiring qualified part-time instructors, the difficulty lies in finding a candidate with the required expertise and teaching experience. Many part-time instructors also have a full-time job, which impacts semester-to-semester retention.

Searches for 4 Administrative Assistant positions have just been concluded. Three of these positions will support academic programs; one will support advising activities. Recruitments for support positions have demonstrated strong, highly qualified applicant pools. Since the last reporting period, we have reclassified three AAll positions to AAIII. These three positions support the Department Chairs. This action has provided opportunities for promotion for our classified staff.

Specialized program accreditation requires that faculty meet the qualifications of the discipline's accreditation guidelines and, where applicable, the requirements set by Nevada legislative regulations. School faculty continues to demonstrate that they retain the appropriate credentials, licensure, and level of education required by their specific discipline. The faculty participates regularly in continuing medical education activities for professional development, as well as a condition of certification/licensure renewal. These activities are supported by the programmatic operating budgets. In addition, several faculty have been presenters at professional conferences, providers of continuing medical education courses, and site surveyors for various accreditation organizations. Several also hold regional or national offices in their discipline organizations. Two members of the faculty have recently been awarded an advanced degree; others are currently enrolled in Master's and Doctoral level coursework.

### **Student Information**

Almost all programs distribute post-graduate and employer surveys, as directed by the specialized accreditation organization, to solicit feedback on the relevance and quality of the professional curriculum, and preparedness for entry level employment. Return rates vary greatly for both graduate and employer surveys. Most programs report utilizing an instrument based on a Likert scale, with scores of 4 and above representing favorable responses. A few programs have deployed electronic surveys, and several others indicated that they are considering this delivery method, hoping to increase the response rate.

Graduate and employer feedback demonstrates that the majority of respondents are highly satisfied with program and student quality. Trends noted with respect to student

comments included the need for more clinical oversight (the respective programs have hired clinical faculty so that all students are visited weekly on-site); the desire for newer equipment and more time to use it (School has been well-supported through competitive funding process and additional equipment is available for student use; open lab time scheduled; student:equipment ratios decreased); the need for more patient exposure (increased number of clinical hours; increased number of clinical sites to provide additional specialty experiences); and the need for more realistic campus-based activities (increased use of simulation technology School-wide; increased interdisciplinary activities; increased computer-based activities). Employers expressed high satisfaction with knowledge base and technical skills. Employer comments stressed the need for good communication, critical thinking, and “workplace ready” clinical skills; ability to manage time effectively; and possession of employability skills. Programmatic changes that have been implemented due to this analysis include incorporating resume preparation and interviewing skills into the curriculum; case-based learning activities; extended campus-based laboratory time, including simulation time; increased clinical hours; and revised clinical manuals.

Students who successfully complete a program of study are eligible to sit for a standardized examination offered by a state or national organization. Such an examination may be required for state licensure and subsequent employment. Programs requiring demonstration of certification to attain Nevada licensure include Cardiorespiratory Sciences, Dental Hygiene, Emergency Medical Technician, Medical Laboratory Technician, Medical Laboratory Scientist, Nursing Assistant, Ophthalmic Technology, Paramedic, Pharmacy Technician, Phlebotomy, Physical Therapist Assistant, Practical Nursing, Registered Nursing, Surgical Technician, Veterinary Technology. Although certification examinations are available for Radiation Therapy Technology, Diagnostic Medical Sonography, and Dental Assistant practitioners, state licensure is not currently required. However, students are strongly encouraged to sit for these exams, as certification is required by some employers.

Licensure and certification examination pass rate data continue to demonstrate that students in most programs have met or exceeded the knowledge expectations for entry level employment in their professional discipline. Many programs consistently exceed state or national averages for first time pass rates. Our Nursing Assistant program has the highest written exam scores of all NA programs in Nevada. Our Veterinary Technician, Pharmacy Technician, Health Information Technology, and Dental Hygiene programs have had 100% first time pass rates for three consecutive years. Most remaining programs have pass rates at 88% and above. Scores for Emergency Medical Technicians and Advanced Emergency Medical Technicians are trending upwards due to significant curricular changes.

Most Limited Entry programs have small enrollments mandated by accreditation ratios, and availability of faculty, training equipment, classroom/laboratory space, and clinical sites. Small enrollments, coupled with an even smaller number of students taking the certification examinations during a given testing period, make it difficult to draw meaningful conclusions from test data for some programs. This has been noted for examinees from the Medical Laboratory Technician and Medical Office Assisting programs.

## **Program Information**

Significant findings/trends that were identified in the review of program reports include the following:

- Decreased enrollment in some programs – recent move of Dental Assisting and Medical Office Assisting to Limited Entry model, with initial decrease in enrollment as students transition to LE requirements; cohort support and better student tracking expected to facilitate increased enrollment. Decrease in RN program attributed to increase in pre-entrance exam rigor. Medical Laboratory Assistant – students able to gain employment after completion of Phlebotomy component.
- Increased attrition in some programs – increase in student personal/financial issues noted for students in PTA, Pharmacy Tech, VT programs. For RN students – underprepared in math proficiency; curriculum change to higher Math pre-requisite, programmatic change in method of teaching content-related math concepts, standardization of math testing across professional curriculum. For PN students – addition of pre-requisite courses to better prepare students for pre-entrance testing, which also allows students to focus on professional curriculum once admitted.
- Competition from proprietary schools – competition for students and clinical sites; CSN more affordable, but competitor programs often shorter in duration.
- Deactivation of three programs – Massage Specialist due to budget constraints and loss of Program Director; Occupational Therapy Assistant due to loss of both full-time faculty and subsequent inability to comply with accreditation requirements; Medical Laboratory Assistant – not enough enrollment to maintain program.
- Employment outlook for most disciplines remains strong, yet some new graduates having difficulty gaining initial employment. Many acute settings eliminating hiring of PNs; requiring RNs to pursue baccalaureate degree within a specific timeframe of hiring,
- Several programs require implementation of Work Keys assessment or Test of Essential Academic Skills to identify deficiencies prior to professional program admission (DA, PN, RN, CRS, RDTP, DH, SON).
- Accreditation issues – probationary accreditation status assigned to Cardiorespiratory Sciences program; full accreditation restored upon hire of full-time Program Director and Director of Clinical Educator. Surgical Technology – new Program Director corrected 33 deficiencies within one year of hire.

## **Assessment Information**

The School has an Assessment Team, with representatives from all three Departments, and meets three times per semester. All programs are required to report specific data (i.e., retention, completion, certification pass rates, etc.) to their respective accrediting bodies. In addition to these indirect measures, the School is working on developing direct measures of student learning in alignment with the College's philosophy of assessment. This has been a challenge for several programs. In response to this issue, the School has appointed an Assessment Coordinator to provide more direction to team members and other faculty tasked with assessment responsibilities. The Coordinator is also developing a basic procedure for assessment, including a reporting format for plans and reports, as well as a timeline for

reporting. School faculty feel that the assessment plan must include both direct and indirect measures to effectively evaluate student learning in Health Sciences.

Changes based on current assessment efforts include revision of existing professional curriculum, change in pre-requisite courses, increased laboratory or clinical hours, software and equipment purchases, development of grading rubrics for evaluating clinical competency, including pre-admission testing to assess basic skills or foundational knowledge (Work Keys, Test of Essential Academic Skills), and increased incorporation of simulation activities.

### **Information, Technology, Equipment, and Space resources**

CSN has libraries on the Cheyenne, Henderson, and Charleston campuses with computers, group study rooms, expert research assistance from librarians and collections of books, journals, and films for use. Faculty can place materials such as textbooks or anatomical models on reserve for short term loans to CSN students and many health science faculty utilize these services. The library website provides 24/7 access to online resources from any location on or off campus and includes full-text e-books, streaming video, and articles from journals, magazines, and newspapers. Increasingly, the content in support of health sciences curriculum is online and accessible from mobile devices. The website provides a variety of information literacy tutorials and research guides to help with coursework and research assignments. There are ten library research guides in support of Health Sciences programs. These guides collect and promote a one stop shop for all library resources and services in support of each program. CSN libraries participate in interlibrary loan and online document delivery programs to support borrowing of materials from other libraries. CSN students and faculty can request books or media items from the UNLV and Nevada State College library collections using a rapid and free delivery service. Over the past academic year, the librarians provided ten course related library instruction sessions for the School of Health Sciences. Chat and email reference service is also provided so that students and faculty can receive high quality assistance from wherever they are working or learning.

The acquisitions costs related for current budget year for Health Sciences are listed below:

Print and ebooks	\$31,132
Print journals	\$6,636
E- journals	\$40,452
Health databases	\$36,363
Streaming film	\$16,681
E-references (incl. general databases for Health Sciences)	<u>\$196,162</u>
Total expenditures	\$327,427

Smart technology is available to and utilized by most faculty. Smart podiums have been installed in all classrooms, with many systems being upgraded since the last reporting period. Faculty have adapted well to the new learning management system and report using many of the available features (i.e., gradebook, testing and communication platforms). Our Registered Nursing program offers a completely on-line didactic track. Most other programs report a hybrid format works best for their students, with instruction taking place in class, and lectures and other resources accessible through the LMS. Computer-based testing is utilized by many programs, although some programs require students to be proctored.

Other instructional technology includes state of the art equipment and instrumentation obtained for student use. The School has been generously supported through donations, grant awards, and in-house funding. The School has received over \$500K annually in Perkins federal funding for the past several years, with additional support received from General Equipment and End-of-Year funds. This has allowed us to provide students with resources that meet industry expectations, support implementation of a new program (Baccalaureate in Applied Science - Medical Laboratory Scientist), and allow for expansion of current programs (Veterinary Technician, Physical Therapist Assistant, and Ophthalmic Technology).

Some examples of equipment/instrumentation purchases from these sources include the following:

Radiation Therapy Technology	Virtual Education in Radiation Therapy (VERT) simulation system
Emergency Medical Services	Ambulance simulators, simulation manikins, extrication training system
Diagnostic Medical Sonography	Picture Archiving and Communication System (PACS) for radiographic interpretation, simulated scanning systems, treadmill, ultrasound tables
Nursing	Simulation manikins, airway trainers, electronic stethoscopes, infusion pumps, pediatric skills lab equipment, infant warmer, simpad system
Clinical Laboratory Sciences	Microscopes, electrophoresis system, hematology analyzer, microbiological identification system, blood culture system, strainers, refrigerator, incubators, centrifuges
Cardiorespiratory Sciences	PACS, ventilators, laryngoscopes, simpad system
Dental Sciences	Intraoral cameras, curing lights, handpieces, saddle chairs
Veterinary Technology	Animal models, dental table, video flat panel
Surgical Technology	Operating room lights and tables, instrument kits, laparotomy simulator
Ophthalmic Technology	Trace edger system

Funding was also used to provide industry-standard software for student use in the following programs: Health Information Technology, Cardiorespiratory Sciences, Clinical Laboratory Sciences, and Nursing.

Funding was received to support professional development activities in the Health Information Technology and Nursing programs.

Finding space to adequately house all Health Sciences programs remains a challenge. In 2010, CSN received an 8.2M donation from the Engelstad Family Foundation. This donation allowed a 18,000 square foot addition to the existing building which provided two offices, two classroom/laboratory spaces, two large smart technology equipped classrooms, and two simulation training “cubes” on the first floor, with 20 faculty offices, a conference room, and 3 large classrooms on the second floor. The first floor offices, classroom/laboratories, and cubes are dedicated spaces for the Cardiorespiratory Sciences program; the other two classrooms are shared spaces, with Health Sciences courses receiving priority scheduling. Second floor classrooms are general purpose classrooms. The donation also provided for new equipment for the Cardiorespiratory Sciences program, development of a Baccalaureate in Applied Sciences in Cardiorespiratory Sciences (Fall 2014 start), as well as a scholarship endowment for all Limited Entry Health Sciences programs.

The Pharmacy Technician program has been allocated permanent space in the K building, which includes both retail and hospital build-outs, and a clean room.

The Veterinary Technician program has had its radiology suite relocated and been allocated additional space in the B building, which is being remodeled to provide classroom, laboratory, and animal housing spaces.

The major capital project currently underway is a \$4.5M renovation of the A building and will provide expanded spaces for the Physical Therapist Assistant, Radiation Therapy Technology, and Ophthalmic Technology programs. Faculty and staff have been relocated to temporary office and teaching facilities during construction. The new facility will be ready for occupancy and instruction in time for Spring 2015.

The remaining spaces to be upgraded are the classrooms, laboratory, and student clinic assigned to the Dental Hygiene and Dental Assisting programs. Although the Dental Hygiene program has decreased its admission cohort, there is still difficulty in scheduling clinic courses to accommodate both programs. Sterilization and radiology facilities need to be upgraded and expanded.

### **External Validation**

All Associate Degree programs are accredited by the Commission on Accreditation of Allied Health Programs (CAAHEP) or other discipline-specific agencies. These include Cardiorespiratory Sciences, Dental Hygiene, Diagnostic Medical Sonography, Health Information Technology, Medical Laboratory Technician, Registered Nurse, Ophthalmic Dispensing, Paramedic Medicine, Physical Therapist Assistant, Surgical Technology, and Veterinary Technician. Radiation Therapy Technology is regionally accredited. The Medical Laboratory Scientist program has applied for initial accreditation.

In addition, several Certificate of Achievement programs have also achieved accreditation status: Dental Assisting, Medical Office Assistant, Pharmacy Technician, and Practical Nursing.

The Nursing Assistant program, a Certificate of Completion program, is recognized by the Nevada State Board of Nursing.

Since the last reporting period the following programs have submitted a self-study report and participated in a site visit: Registered Nursing, Dental Hygiene, Diagnostic Medical Sonography, Medical Laboratory Technician, Nursing Assistant, Radiation Therapy Technology, Surgical Technology, and Veterinary Technology. All programs have been granted continuing accreditation by a regional, state, or discipline-based organization. In the years between comprehensive reviews, an annual report is submitted.

All Health Sciences disciplines receive input from community advisory boards, which meet face to face at least twice annually. Additional input is gathered via electronic format as needed. Advisory boards review curriculum and other program materials to ensure continued relevance to practice, provide suggestions for equipment and software purchases, examine results of assessment activities, and make recommendations for improving clinical experiences.

## **Strengths and Challenges**

### Strengths

- Dedicated faculty and staff committed to programmatic and student excellence
- Team approach in School and program leadership
- Interdisciplinary activities across programs
- Student laboratories equipped to industry standards
- ~ 600K in equipment, instrumentation, and software obtained annually from internal and external funding sources
- Full accreditation status for all possible programs (1 pending - MLS)
- Strong completion and graduation rates for most programs
- Articulations with public and private educational institutions for advanced degrees
- Strong partnerships with local clinical facilities – currently 350+ affiliations
- Advisory board participation in curriculum review and purchasing
- Preceptor training program
- Incorporation of simulation technology
- Development of Guided Pathways to facilitate more effective advising
- Collaboration with CCSD to promote healthcare occupations
- Career ladders available in several disciplines – CLS, EMS, HIT, NURS, OPHT
- Students provide over 1 million hours of uncompensated services annually through clinical hours and service projects
- Excellent statewide reputation as a provider of a healthcare workforce

## Challenges

- Increasing recruitment of students in low-enrollment programs
- Retention of students in academically rigorous programs
- Recruitment of qualified faculty from clinical practice environment
- Additional cost burdens to Health Sciences students
- Competition from proprietary schools
- Difficulty in acquiring additional clinical affiliate sites
- Need for more effective marketing of programs
- Difficulty of employment for new graduates in some disciplines
- Maintenance of instrumentation and other instructional equipment

## Conclusion

The Engelstad School of Health Sciences is a major contributor to the state and local healthcare workforce. We recognize the importance of that responsibility and are proud of our efforts in providing high quality graduates.