



2009-10 REVIEW OF EXISTING PROGRAMS

Prepared by the Office of Academic and Student Affairs
for the Board of Regents
Academic, Research, and Student Affairs Committee

September 2010

*University of Nevada, Las Vegas • University of Nevada, Reno • Nevada State College
College of Southern Nevada • Great Basin College
Truckee Meadows Community College • Western Nevada College
Desert Research Institute*

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INTRODUCTION

Pursuant to Board policy (*Title 4, Chapter 14, Section 4*—in part), a review of existing programs shall be conducted by all institutions of the Nevada System of Higher Education on a regularly scheduled basis. Specifically, the policy provides the following:

1. *A review of existing academic programs shall be conducted by the universities, state college, and community colleges on at least a ten-year cycle to assure academic quality, and to determine if need, student demand, and available resources support their continuation pursuant to the following.*
 - a. *The review of existing programs must include multiple criteria. Although criteria may vary slightly between campuses, as institutions have different missions and responsibilities, there should be comparable data from all programs. The review must include both quantitative and qualitative dimensions of program effectiveness, and peer review.*
 - b. *Criteria to be utilized in the review of existing programs shall include the following: quality, need/demand for the program, relation to the institutional mission, cost, relationship to other programs in the System, student outcomes, and quality and adequacy of resources such as library materials, equipment, space, and nonacademic services.*
 - c. *An annual report will be published by the institution on the results of existing program evaluations and a summary of that report will be forwarded to the Chancellor's Office and presented to the and Academic, Research and Student Affairs Committee annually.*

The process for reviewing programs varies by institution but contains similar vital components. These components include internal reviews, such as self-study methods and surveys, as well as, external reviews, including site visits and advisory committees. After the ten-year period for review is complete, each institution analyzes the above criteria to draw conclusions and then to provide recommendations for improvement of the programs. Besides changes to programs, the results of the review include programs that are eliminated or inactivated and new programs approved by the Board of Regents.

This annum, reviewed programs included a wide range of disciplines from Computer Science and Fine Arts to Nutrition and Real Estate, totaling 82 programs systemwide. Furthermore, 2 new programs were approved by the Board and 35 programs were eliminated or inactivated in the past year where the need was no longer present.

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University of Nevada, Las Vegas

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ANNUAL REVIEW OF PROGRAMS

Title 4, Chapter 14, Section 4

Institution: University of Nevada, Las Vegas

Academic Year of Review: 2009-10

I. List the existing programs and corresponding degree level for all programs that were reviewed over the past year (e.g. Economics, Bachelor of Science).

Criminal Justice, M.A.

English, B.A., M.A., M.F.A., Ph.D.

Environmental Studies, B.A., B.S.; Environmental Science, M.S., Ph.D.

Health Promotion, B.S., M.Ed.

Hospitality Administration, Ph.D.

Physics (Computational & Applied), B.S., M.S., Ph.D.

Political Science, B.A., M.A.

Workforce Education, B.S., M.Ed., M.S.

II. List any programs and corresponding degree level for all programs that were eliminated or placed on inactive status this past year (e.g. Political Science, Master of Arts).

Clinical Laboratory Science, B.S.

Physical Therapy, M.S.

Urban and Environmental Horticulture, B.S.

III. List all new programs and corresponding degree level for all programs that received Board approval this past year (e.g. History, Bachelor of Arts).

Joint Doctor of Nursing Practice, D.N.P., (approved 12/17/2009)

PROGRAM REVIEW
University of Nevada, Las Vegas
Criminal Justice, M.A.

I. Description of Program reviewed

The Department of Criminal Justice offers a broad-based graduate program leading to the Master of Arts degree. The program addresses issues of crime and criminal justice within an analytical framework and emphasizes theory and research and their implications for social policy. The curriculum is grounded in the social and behavioral sciences and in legal approaches to crime and social control. It draws from contemporary research and theoretical developments across a spectrum of academic disciplines.

The graduate program in criminal justice offers two degree options. The Traditional Master of Arts degree is designed to prepare students for doctoral studies in the field and in related areas of the social and behavioral sciences. Those who obtain this degree may also assume teaching positions at the community college level. The Professional Master's degree is designed to serve the needs of professionals currently working in justice-related agencies by providing the knowledge and skills to enhance their performance in current positions and/or prepare them for career advancement. Both degrees require a minimum of 36 semester hours of study. Students enrolled in the traditional Master of Arts degree track are required to complete a scholarly thesis. Students seeking the Professional Master's degree must pass a comprehensive examination.

II. Review Process and Criteria

A. The Faculty Senate Program Review processes consist of several steps:

- 1) An internal self-study by the program undergoing review.
- 2) On-line surveys of program students and faculty that are summarized by a member of the Faculty Senate Program Review committee and provided to the external peer reviewers and the department.
- 3) An external peer review report prepared by faculty from other institutions. The reviewing faculty read the internal self-study, visit the campus for a day, interview program participants, and write and submit the external peer review report. These reviewers have access to basic data about UNLV and the specific program they are reviewing on the public Institutional Analysis and Planning website.
- 4) A response by the program to the external peer review.
- 5) A final internal report prepared by the Faculty Senate Program Review committee. The program may respond to the report, if desired.

B. Review Criteria

Reports by external reviewers are prepared following UNLV Faculty Senate guidelines covering the following major areas:

- 1) Program Description, Admission Requirements, Budget, Students, Program Curriculum, Degree Requirements, Faculty, Facilities and Support, Student Assessment and Outcomes.
- 2) The final internal review report evaluates the department self-study, on-line surveys, the external review report, the department response to the external review, and determines commendations and recommendations.

C. Data Sources for Section IV

The following describes the specific fields that were used to obtain the data from Datanet for Section IV.

Letter A: Datanet Headcount Trends

Terms: Recent Fall Terms (final), Fall only is used

Cohort: All Students

Measure: Student Headcount

Group by: Level

Criteria: Program Codes Are: CRJ, CRJH, CRJPRB, CRJPRE, CRJMA, CRJPRF

Letter B: Datanet Degrees Conferred (the most recent year's number can fluctuate as additional degrees are processed and the system is updated)

Academic Year: select each year and record number

Report Type: Totals

Record Type: Degrees Only

Report Columns: Level & Degree

Criteria: Student Department Code Is: CRJ

Letter C:

Terms: Recent Fall Terms (Final)

Cohort: All Students

Measure: Enrollments

Group by: Course Prefix

Additional Criteria: Course College is Greenspun College of Urban Affairs

III. Major Findings and Conclusions of the Program Review

A. Commendations

- 1) The external reviewers were very impressed with the quality of the faculty, their commitment to students, and their high level of collegiality.
- 2) The internal final report said that the faculty is largely satisfied with department management and evaluation processes, and reports very high internal moral, collegiality and mutual support. Faculty report feeling encouraged by the department to improve both their research and teaching, and generally seem to feel that their efforts in these regards are fairly recognized and rewarded.

B. Recommendations

1) Both the internal Faculty Senate report and the external reviewer's report mentioned that the department has two viable and high quality master's degree programs in Criminal Justice, although they currently overlap to a large extent. With the exception of the thesis requirement vs. comprehensive exam, and a slight difference in electives, both programs are essentially the same, and students take most of their classes together. If the department decides to offer a Ph.D. in Criminal Justice, the external reviewers suggest a greater separation of the two master's degrees, with the professional master's program being much more accessible and flexible for students. Alternatively, there could be a consolidation of the two masters programs.

2) The internal Faculty Senate final report stated that the program needs more support staff, as 100% of faculty respondents (to the survey) bemoan the existence of only one current full time administrative staff member.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|------------|
| 2009-10 | <u>803</u> |
|---------|------------|

B. Number of graduates from the program for the following years:

| | |
|---------|------------|
| 2007-08 | <u>188</u> |
| 2008-09 | <u>174</u> |
| 2009-10 | <u>186</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|-------------|
| Fall 2009 | <u>1831</u> |
|-----------|-------------|

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW <i>University of Nevada, Las Vegas</i> <i>English, B.A., M.A., M.F.A., Ph.D.</i></p> |
|---|

I. Description of Program Reviewed

The Department of English offers courses of study leading to the degree of Bachelor of Arts. The undergraduate program offers a first-rate education at once focused and flexible, intellectually stimulating and practically valuable.

To help majors and non-majors alike define and meet their own personal and professional goals, the department offers a rich array of elective courses in literature in translation; in creative, business, and technical writing; in professional communication, composition, and editing; and in folklore, as well as numerous classes cross-listed with the Afro-American, Classical, Cultural, Ethnic, Film, and Women's Studies programs.

The Department of English also offers programs of study leading to the Master of Arts, Master of Fine Arts, and Doctor of Philosophy degrees. The M.A. program involves primarily course work at the graduate level in English and American literature or in language studies. A thesis is optional but is recommended for all students.

The M.F.A. program is designed to be a three-year, intensive studio arts terminal degree with a strong international emphasis and requires the writing of a booklength creative thesis in either fiction or poetry.

The Ph.D. program is a highly specialized program designed to train students for careers in teaching at the college or university level and to develop in them a capacity for research, original thought, and writing that ordinarily accompanies such careers. The doctoral program is entirely focused on literary study; there is no language study or writing option in it.

The department, in conjunction with the International Institute of Modern Letters, also offers a program leading to the degree of Doctor of Philosophy in English, with a Creative Dissertation. This program centers on the study of English and American literature and is designed to train students for careers in teaching of English at the college or university level, as well as for careers in writing, editing, and publishing.

II. Review Process and Criteria

A. The Faculty Senate Program Review processes consist of several steps:

- 1) An internal self-study by the program undergoing review.
- 2) On-line surveys of program students and faculty that are summarized by a member of the Faculty Senate Program Review committee and provided to the external peer reviewers and the department.

3) An external peer review report prepared by faculty from other institutions. The reviewing faculty read the internal self-study, visit the campus for a day, interview program participants, and write and submit the external peer review report. These reviewers have access to basic data about UNLV and the specific program they are reviewing on the public Institutional Analysis and Planning website.

4) A response by the program to the external peer review.

5) A final internal report prepared by the Faculty Senate Program Review committee. The program may respond to the report, if desired.

B. Review Criteria

Reports by external reviewers are prepared following UNLV Faculty Senate guidelines covering the following major areas:

1) Program Description, Admission Requirements, Budget, Students, Program Curriculum, Degree Requirements, Faculty, Facilities and Support, Student Assessment and Outcomes.

2) The final internal review report evaluates the department self-study, on-line surveys, the external review report, the department response to the external review, and determines commendations and recommendations.

C. Data Sources for Section IV

The following describes the specific fields that were used to obtain the data from Datatrend for Section IV.

Letter A: Datatrend Headcount Trends

Terms: Recent Fall Terms (final), Fall only is used

Cohort: All Students

Measure: Student Headcount

Group by: Level

Criteria: Program Codes Are: ENG, ENGH, ENGPRB, ENGTCH, ENGMA, ENGPHD

Letter B: Datatrend Degrees Conferred (the most recent year's number can fluctuate as additional degrees are processed and the system is updated)

Academic Year: select each year and record number

Report Type: Totals

Record Type: Degrees Only

Report Columns: Level & Degree

Criteria: Student Department Code Is: ENG

Letter C:

Terms: Recent Fall Terms (Final)

Cohort: All Students

Measure: Enrollments

Group by: Course Prefix

Additional Criteria: Course College is College of Liberal Arts

III. Major Findings and Conclusions of the Program Review

A. Commendations

- 1) Good morale: strong rapport between undergraduate and graduate students; many faculty supportive of and kind to each other.
- 2) Bright, serious undergrads
- 3) Grad student admission rate increasingly selective
- 4) Increased attention to theory and multiculturalism and methods
- 5) The Creative Writing program was rated one of the “top five graduate programs in Creative Writing” and of the “top five” innovative/unique programs in Creative Writing by the July 2007 issue of *The Atlantic*.

B. Recommendations

- 1) Help needed from the administration:
 - a) more faculty
 - b) better facilities
- 2) Curriculum:
 - a) World Lit needs more faculty support
 - b) maybe a B.A. Paper for capstone
 - c) develop track for Business and Professional Writing
- 3) Promotion and tenure
 - a) more “transparency” re: standards
 - b) more attention to content/quality at 3rd yr review
- 4) 45% of the English Department’s instructors are part-time. (National norms are 35-38 percent) More funds need to be devoted to hiring full-time, tenure-track faculty. The lack of full-time faculty has resulted in a time consuming restructuring of courses in to large mega-sections. While this restructuring does provide students with direct contact to distinguished professors, they are no substitute for smaller class size.
- 5) System wide replacement funding should be established for the loss of professors on sabbatical or professional development leave.
- 6) Increased support staff for grant writing is needed.
- 7) Recent administrations have shifted the burden of maintaining building infrastructure (office furniture, blinds, even some building repairs) to the departments without any increases in their

operating budgets. The English Department has insufficient fiscal resources that may hinder its continued success.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|------------|
| 2009-10 | <u>392</u> |
|---------|------------|

B. Number of graduates from the program for the following years:

| | |
|---------|------------|
| 2007-08 | <u>91</u> |
| 2008-09 | <u>103</u> |
| 2009-10 | <u>85</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|-------------|
| Fall 2009 | <u>8096</u> |
|-----------|-------------|

PROGRAM REVIEW
University of Nevada, Las Vegas
Environmental Studies, B.A., B.S.
Environmental Science, M .S., Ph.D.

I. Description of Program Reviewed

Undergraduate

The Bachelor of Arts degree in Environmental Studies is intended to provide students with a broad theoretical background in the natural sciences and social sciences, a practical understanding of environmental issues facing our world, and the skills necessary to apply this knowledge to environmental management. In addition to the above the Bachelor of Science degree in Environmental Studies is intended to provide students with the quantitative skills necessary to apply this knowledge to environmental management.

Graduate

The graduate program in Environmental Science fosters an understanding of interrelationships between disciplines in addition to requiring depth of study in specialized areas. It emphasizes the need to understand the social context and environmental consequences of using science and technology to serve human needs. The program requires all students to take two core courses: Environmental Problem Solving, and Environmental Law and Policy Seminar. Other course work in support of a student's specialization generally includes courses from several departments. Student research often crosses disciplinary lines.

Since the review was completed, the Department of Environmental Studies has merged with the Department of Public Affairs.

II. Review Process and Criteria

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- 3) An external peer review report prepared by faculty from other institutions. The reviewing faculty read the internal self-study, visit the campus for a day, interview program participants, and write and submit the external peer review report. These reviewers have access to basic data about UNLV and the specific program they are reviewing on the public Institutional Analysis and Planning website.
- 4) A response by the program to the external peer review.

5) A final internal report prepared by the Faculty Senate Program Review committee. The program may respond to the report, if desired.

B. Review Criteria

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1) Program Description, Admission Requirements, Budget, Students, Program Curriculum, Degree Requirements, Faculty, Facilities and Support, Student Assessment and Outcomes.

2) The final internal review report evaluates the department self-study, on-line surveys, the external review report, the department response to the external review, and determines commendations and recommendations.

C. Data Sources

The following describes the specific fields that were used to obtain the data from Datanet for Section IV.

Letter A: Datanet Headcount Trends

Terms: Recent Fall Terms (final), Fall only is used

Cohort: All Students

Measure: Student Headcount

Group by: Level

Criteria: Program Codes Are: ENV, ENVBS, ENVMS, ENVPHD, ENVPRB

Letter B: Datanet Degrees Conferred (the most recent year's number can fluctuate as additional degrees are processed and the system is updated)

Academic Year: select each year and record number

Report Type: Totals

Record Type: Degrees Only

Report Columns: Level & Degree

Criteria: Student Department Code Is ENV

Letter C:

Terms: Recent Fall Terms (Final)

Cohort: All Students

Measure: Enrollments

Group by: Course Prefix

Additional Criteria: Course College is Urban Affairs

III. Major Findings and Conclusions of the Program Review

A. Commendations

1) The students at all levels report that the education being provided is of high quality and that it is being provided by faculty members who genuinely care about them as individuals.

2) The external reviewers said that the department had shown consistent strength in attracting external funding.

B. Recommendations

1) Quantitative Evaluation of Workloads. The external reviewers thought that the high workload level should be evaluated and solutions found before faculty members experienced "burn out". One of the solutions they suggested was to hire an additional faculty member and preferably one at a senior-level.

2) The external reviewers questioned the appropriateness of the program being housed in the Greenspun College of Urban Affairs. However, their suggestion of the program moving to another college or reporting directly to the provost was not endorsed by the faculty. The faculty believed that the Greenspun College of Urban Affairs was the appropriate place for this interdisciplinary program.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>88</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|-----------|
| 2007-08 | <u>14</u> |
| 2008-09 | <u>8</u> |
| 2009-10 | <u>19</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>634</u> |
|-----------|------------|

PROGRAM REVIEW
University of Nevada, Las Vegas
Health Education, B.S.
Health Promotion, M.Ed.

I. Description of Program Reviewed

Undergraduate

The Health Education degree program provides academic and professional opportunities for students who wish to prepare themselves as professionals, resource persons, and teachers in the special subject matter areas included in the discipline of health promotion. Majors take a set of courses designed to promote an understanding of health enhancement, wellness, and disease prevention. They study a broad range of public health concerns from individual lifestyle disease prevention and harm reduction behaviors to development, implementation and evaluation of community-based health programs.

Masters

The goal of the 36-semester credit hour Health Promotion graduate program is to provide students with the theory, knowledge, and skills needed to integrate the principles of health promotion into a variety of community, research, clinical, business or school settings and/or to pursue advanced study. Specifically, the Health Promotion degree program will prepare students to: 1) assess and communicate individual, family, and community needs, 2) plan, implement, evaluate, and administer programs, 3) act as a resource person by coordinating provisions for services and applying appropriate research principles and methods, and 4) advance the goals of job-related professional organizations. To this end, eight concentrations in the Health Promotion degree are offered.

II. Review Process and Criteria

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- 2) On-line surveys of program students and faculty that are summarized by a member of the Faculty Senate Program Review committee and provided to the external peer reviewers and the department.
- 3) An external peer review report prepared by faculty from other institutions. The reviewing faculty read the internal self-study, visit the campus for a day, interview program participants, and write and submit the external peer review report. These reviewers have access to basic data about UNLV and the specific program they are reviewing on the public Institutional Analysis and Planning website.
- 4) A response by the program to the external peer review.

5) A final internal report prepared by the Faculty Senate Program Review committee. The program may respond to the report, if desired.

B. Review Criteria

Reports by external reviewers are prepared following UNLV Faculty Senate guidelines covering the following major areas:

1) Program Description, Admission Requirements, Budget, Students, Program Curriculum, Degree Requirements, Faculty, Facilities and Support, Student Assessment and Outcomes.

2) The final internal review report evaluates the department self-study, on-line surveys, the external review report, the department response to the external review, and determines commendations and recommendations.

C. Data Sources for Section IV

The following describes the specific fields that were used to obtain the data from Datanet for Section IV.

Letter A: Datanet Headcount Trends

Terms: Recent Fall Terms (final), Fall only is used

Cohort: All Students

Measure: Student Headcount

Group by: Level

Criteria: Program Codes Are: HED, HEDCOM, HEDPRB, HEDPRE, HEDSCH, HEP

Letter B: Datanet Degrees Conferred (the most recent year's number can fluctuate as additional degrees are processed and the system is updated)

Academic Year: select each year and record number

Report Type: Totals

Record Type: Degrees Only

Report Columns: Level & Degree

Criteria: Student Department Code Is HPE

Letter C:

Terms: Recent Fall Terms (Final)

Cohort: All Students

Measure: Enrollments

Group by: Course Prefix

Additional Criteria: Course College is Community Health Sciences

III. Major Findings and Conclusions of the Program Review

Commendations

The school health and community health education programs in the department complement each other and serve both the region and the State as the primary professional preparation programs for students in these fields. The Graduate program offers more challenging coursework and competencies suitable for advanced level positions.

UNLV Department of Health Promotion has developed the undergraduate curriculum based on national competencies established by the American Association for Health Education (AAHE). Additionally, the program follows licensure guidelines created by the state of Nevada for the public school systems. The program is currently accredited by the American Association for Health Education (AAHE), one of the most prestigious health education professional organizations in the nation, and by the National Council for Accreditation of Teacher Education.

Recommendations

Student Policies were difficult to find online. If they are to be available and assessable for students, the link to the policies needs to be easier to locate.

Faculty in the Department should review and implement the revision(s) of certain course offerings to reflect strengthening select content areas.

Relieving the two full-time faculty of part of the teaching load and providing support for grant writing and research could be beneficial to the Department of Health Promotion and also provide opportunities to engage graduate students in working with two well-known and established health educators. Other faculty in the School of Public Health could be asked to teach some of the core subjects in the community and school health degree program.

Faculty should have input into program development, resource selection and development, and policies and procedures that affect, not only the resources of the department, but also the direction, structure and function of the department and the School.

It is recommended that an exit interview for graduate students be conducted immediately following completion of the degree in order to assess the students' perception of program value and to garner insight into student experiences during the degree process.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|----------------|
| 2009-10 | <u>69 Fall</u> |
|---------|----------------|

B. Number of graduates from the program for the following years:

| | |
|---------|-----------|
| 2007-08 | <u>33</u> |
| 2008-09 | <u>21</u> |
| 2009-10 | <u>26</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>808</u> |
|-----------|------------|

| |
|--|
| <p style="text-align: center;">PROGRAM REVIEW <i>University of Nevada, Las Vegas</i> <i>Hospitality Administration, Ph.D.</i></p> |
|--|

I. Description of Program Reviewed

The Ph.D. program is a multi-conceptual and research-based degree program designed to produce top quality hospitality and tourism educators and researchers. It not only focuses on preparing students to be excellent teachers at the university level, the program also engages them in conducting scholarly research in hospitality and tourism management. Upon graduation, students will be able to teach and research at the university level, and work at industry research institutions. The Ph.D. program is highly competitive, seeking motivated individuals who are committed to pursuing academic and research careers in hospitality and tourism. The program is partly supported by the Ace Denken Co. Ltd. Endowment.

II. Review Process and Criteria

A. The Faculty Senate Program Review processes consist of several steps:

- 1) An internal self-study by the program undergoing review.
- 2) On-line surveys of program students and faculty that are summarized by a member of the Faculty Senate Program Review committee and provided to the external peer reviewers and the department.
- 3) An external peer review report prepared by faculty from other institutions. The reviewing faculty read the internal self-study, visit the campus for a day, interview program participants, and write and submit the external peer review report. These reviewers have access to basic data about UNLV and the specific program they are reviewing on the public Institutional Analysis and Planning website.
- 4) A response by the program to the external peer review.
- 5) A final internal report prepared by the Faculty Senate Program Review committee. The program may respond to the report, if desired.

B. Review Criteria

Reports by external reviewers are prepared following UNLV Faculty Senate guidelines covering the following major areas:

- 1) Program Description, Admission Requirements, Budget, Students, Program Curriculum, Degree Requirements, Faculty, Facilities and Support, Student Assessment and Outcomes.
- 2) The final internal review report evaluates the department self-study, on-line surveys, the external review report, the department response to the external review, and determines commendations and recommendations.

C. Data Sources for Section IV

The following describes the specific fields that were used to obtain the data from Datanet for Section IV.

Letter A: Datanet Headcount Trends

Terms: Recent Fall Terms (final), Fall only is used

Cohort: All Students

Measure: Student Headcount

Group by: Level

Criteria: Program Code Is: HOAPHD

Letter B: Datanet Degrees Conferred (the most recent year's number can fluctuate as additional degrees are processed and the system is updated)

Academic Year: select each year and record number

Report Type: Totals

Record Type: Degrees Only

Report Columns: Level & Degree

Criteria: Student Department Code Is: HOA

Letter C:

Terms: Recent Fall Terms (Final)

Cohort: All Students

Measure: Enrollments

Group by: Course Prefix

Additional Criteria: Course College is William F. Harrah College of Hotel Administration

III. Major Findings and Conclusions of the Program Review

A. Commendations

1) The external reviewers stated that when comparing the top 10 doctoral programs in the US, overall, the UNLV Ph.D. program in hotel administration has been perceived by peers as among the top five programs in the nation.

2) Retention in the program is excellent.

3) In comparison with other major universities, UNLV has excellent opportunities for students to gain teaching experience.

B. Recommendations

1) External reviewers said that while it is admirable for students to have created four publications and made four conference presentations, actual student numbers involved were small; two students published and four were involved in the presentations. It would be desirable to see the expectation of participation in these important learning activities through a broader group of students.

2) The hospitality doctoral program has 24 learning outcomes. This is a very large number of outcomes, virtually impossible to manage successfully. Many of them are very specific and detailed and the assessment measures are often vague. Program learning outcomes should be broader, with specific measurable assessment measures. It is suggested that the program faculty members reconsider the learning outcomes, combine/reconfigure them into a more global listing, and carefully consider assessment tools and expectations.

3) The number of RA positions or research support for Ph.D. students is small compared with the number of TA positions, and the research quality and output compared with other major research institutions is relatively weak.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>20</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|-----------|
| 2007-08 | <u>21</u> |
| 2008-09 | <u>14</u> |
| 2009-10 | <u>25</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|-----------|
| Fall 2009 | <u>53</u> |
|-----------|-----------|

PROGRAM REVIEW

University of Nevada, Las Vegas

Physics (Computational & Applied), B.S., M.S., Ph.D.

I. Description of Program Reviewed

The Bachelor of Science in Physics provides students with preparation for governmental or industrial positions or for graduate studies in physics or related areas. The Bachelor of Science in Applied Physics is designed to introduce the major branches of physics to those seeking double degrees and for those preparing for professions other than physics. The Bachelor of Science in Computational Physics is intended to train students with the state-of-the-art knowledge in physics and scientific computing for either professional positions or graduate studies in computational physics or related areas.

The Physics Department offers M.S. and Ph.D. degrees in physics, with concentrations in three research areas: laser physics, high pressure physics, and condensed matter physics. The department's experimental research programs are supported by fully equipped laboratories and mechanical, electronic and glass shops. The department is well equipped with state-of-the-art computing facilities, which allow for performing virtually any modeling and computer simulation.

II. Review Process and Criteria

A. The Faculty Senate Program Review processes consist of several steps:

- 1) An internal self-study by the program undergoing review.
- 2) On-line surveys of program students and faculty that are summarized by a member of the Faculty Senate Program Review committee and provided to the external peer reviewers and the department.
- 3) An external peer review report prepared by faculty from other institutions. The reviewing faculty read the internal self-study, visit the campus for a day, interview program participants, and write and submit the external peer review report. These reviewers have access to basic data about UNLV and the specific program they are reviewing on the public Institutional Analysis and Planning website.
- 4) A response by the program to the external peer review.
- 5) A final internal report prepared by the Faculty Senate Program Review committee. The program may respond to the report, if desired.

B. Review Criteria

Reports by external reviewers are prepared following UNLV Faculty Senate guidelines covering the following major areas:

1) Program Description, Admission Requirements, Budget, Students, Program Curriculum, Degree Requirements, Faculty, Facilities and Support, Student Assessment and Outcomes.

2) The final internal review report evaluates the department self-study, on-line surveys, the external review report, the department response to the external review, and determines commendations and recommendations.

C. Data Sources for Section IV

The following describes the specific fields that were used to obtain the data from Datanet for Section IV.

Letter A: Datanet Headcount Trends

Terms: Recent Fall Terms (final), Fall only is used

Cohort: All Students

Measure: Student Headcount

Group by: Level

Criteria: Program Codes Are: PHY, PHYHON, PHYPRB, PHYMS, PHYPHD

Letter B: Datanet Degrees Conferred (the most recent year's number can fluctuate as additional degrees are processed and the system is updated)

Academic Year: select each year and record number

Report Type: Totals

Record Type: Degrees Only

Report Columns: Level & Degree

Criteria: Student Department Code Is: PHY, PHYS

Letter C:

Terms: Recent Fall Terms (Final)

Cohort: All Students

Measure: Enrollments

Group by: Course Prefix

Additional Criteria: Course College is College of Sciences

III. Major Findings and Conclusions of the Program Review

A. Commendations

1) The external reviewers noted that the scope, educational goals and academic rigor of these specific programs are all comparable to those offered by peer institutions.

2) The external reviewers also noted a strong upward trend in the breadth and national renown of the department's research activities, which include well-regarded research programs in condensed matter physics (with a particular focus on experimental and theoretical studies of materials at high pressure) and astrophysics.

B. Recommendations for the undergraduate program

1) The Department should implement its plan to actively mentor undergraduate students via regular contact (ideally via mandatory pre-registration meetings every semester) with faculty.

2) Consideration should be given to curricula revisions that would allow an easier transition for students between the current introductory and advanced courses.

3) Implement the academic assessment plan.

C. Recommendations for the graduate program

1) The single most important step toward improving program quality would be increased financial support for graduate students. The Department and the College have both made commendable efforts to attract quality students via creative use of existing funds, but success over the longer term requires additional funding so that the Department can make competitive offers to a larger number of students.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>90</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|-----------|
| 2007-08 | <u>8</u> |
| 2008-09 | <u>5</u> |
| 2009-10 | <u>15</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|-------------|
| Fall 2009 | <u>1705</u> |
|-----------|-------------|

PROGRAM REVIEW
University of Nevada, Las Vegas
Political Science, B.A., M.A.

I. Description of Program Reviewed

Undergraduate

The Department of Political Science seeks to instill in its graduates a variety of skills and levels of knowledge that will serve them regardless of the profession they ultimately choose. Among these objectives are:

1. To enhance their abilities to communicate in both written and oral form;
2. To enhance their ability to think through and compare competing theories and information utilizing logical and analytical means.
3. To be knowledgeable in the six subfields of the discipline including major trends, debates, theories, and methods.
4. To be prepared for graduate study in political science or a related discipline such as law.

Graduate

The Department of Political Science offers two master's degree programs: one in Political Science, the other in Ethics and Policy Studies, and a doctoral degree program in Political Science. The doctoral program was not part of this review.

The Political Science degree is a Master of Arts degree where students tailor their program with the assistance of the department's graduate coordinator. There is also a Master of Arts degree in Ethics and Policy Studies (EPS). EPS is a unique program for students who have already begun or are planning to enter careers in government, legal or medical professions, or business, and who are curious enough to study the ethical questions involved in the making of decisions in those areas.

II. Review Process and Criteria

A. The Faculty Senate Program Review processes consist of several steps:

- 1) An internal self-study by the program undergoing review.
- 2) On-line surveys of program students and faculty that are summarized by a member of the Faculty Senate Program Review committee and provided to the external peer reviewers and the department.
- 3) An external peer review report prepared by faculty from other institutions. The reviewing faculty read the internal self-study, visit the campus for a day, interview program participants, and write and submit the external peer review report. These reviewers have access to basic data about UNLV and the specific program they are reviewing on the public Institutional Analysis and Planning website.
- 4) A response by the program to the external peer review.

5) A final internal report prepared by the Faculty Senate Program Review committee. The program may respond to the report, if desired.

B. Review Criteria

Reports by external reviewers are prepared following UNLV Faculty Senate guidelines covering the following major areas:

1) Program Description, Admission Requirements, Budget, Students, Program Curriculum, Degree Requirements, Faculty, Facilities and Support, Student Assessment and Outcomes.

2) The final internal review report evaluates the department self-study, on-line surveys, the external review report, the department response to the external review, and determines commendations and recommendations.

C. Data Sources for Section IV

The following describes the specific fields that were used to obtain the data from Datanet for Section IV.

Letter A: Datanet Headcount Trends

Terms: Recent Fall Terms (final), Fall only is used

Cohort: All Students

Measure: Student Headcount

Group by: Level

Criteria: Program Codes Are: POS, POSHON, POSPRB, POSMA, POSPHD

Letter B: Datanet Degrees Conferred (the most recent year's number can fluctuate as additional degrees are processed and the system is updated)

Academic Year: select each year and record number

Report Type: Totals

Record Type: Degrees Only

Report Columns: Level & Degree

Criteria: Student Department Code Is: POS, PSC

Letter C:

Terms: Recent Fall Terms (Final)

Cohort: All Students

Measure: Enrollments

Group by: Course Prefix

Additional Criteria: Course College is College of Sciences

III. Major Findings and Conclusions of the Program Review

A. Commendations

1) The undergraduate and graduate students are good, and are getting better, as more and more students apply, and as word gets around that this is a good place to get a BA and an advanced degree.

2) The College-level advising system for undergraduates struck us (the external reviewers) as very interesting and effective, and a model from which other universities could learn, freeing up departmental faculty from what on other campuses can be a burdensome routine.

3) The faculty seem successful as teachers, and are individually productive as researchers, with a respectable flow of publications. This is indeed an exemplar of a growing department with the potential of becoming a nationally-visible center of political science research and graduate training.

4) One of the most encouraging signs for us (the external reviewers) is the support given by the College and University administration for the Department's plans.

B. Recommendations

1) In the international or global studies field, consideration should be given to recruiting faculty with functional and policy interests that cut across world regions such as energy policies, migration issues, human rights, security studies, etc.

2) Many MA students – and no doubt many undergrads – are interested in, and preparing for careers in, public service and policy positions in the West generally and Nevada specifically. Therefore some more faculty effort – recruitment, upper-division and graduate instruction – should be given to these local and regional issues. An emphasis on policy analysis would help reinforce teaching and research at all levels, graduate and undergraduate.

3) Assistantship funds are seriously inadequate for the department's ambitious plans. We understand that there will be only 8 assistantships in the next academic year for a program with a projected 40 M.A. and 8 Ph.D. students

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|------------|
| 2009-10 | <u>470</u> |
|---------|------------|

B. Number of graduates from the program for the following years:

| | |
|---------|------------|
| 2007-08 | <u>111</u> |
| 2008-09 | <u>101</u> |
| 2009-10 | <u>84</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|-------------|
| Fall 2009 | <u>2920</u> |
|-----------|-------------|

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW <i>University of Nevada, Las Vegas</i> <i>Workforce Education, B.S., M.Ed., M.S.</i></p> |
|---|

I. Description of Program reviewed

The Workforce Education & Development Program is dedicated to preparing highly competent professionals for the following careers:

- Career and Technical teachers in public/private schools (pre-service and in-service);
- Training/HRD/Workplace Learning and Performance professionals;
- Community college and postsecondary faculty;
- Workforce Education program administrators and leaders;
- Instructional and curriculum designers;
- Employment, job placement, and career transition service professionals; and,
- Other positions in education and workforce development.

The graduate program in Workforce Education and Development provides advanced preparation for workforce educators in a variety of settings and offers a Master of Science (M.S.) and Master of Education (M.Ed.) with concentrations in Workplace Learning and Performance (formerly Training and Development), Teaching & Leadership, and Graduate Teacher Licensure.

Since the majority of the students are working adults, courses are offered through a combination of evening, Saturday, intensive weekend, and online formats.

II. Review Process and Criteria

A. The Faculty Senate Program Review processes consist of several steps:

- 1) An internal self-study by the program undergoing review.
- 2) On-line surveys of program students and faculty that are summarized by a member of the Faculty Senate Program Review committee and provided to the external peer reviewers and the department.
- 3) An external peer review report prepared by faculty from other institutions. The reviewing faculty read the internal self-study, visit the campus for a day, interview program participants, and write and submit the external peer review report. These reviewers have access to basic data about UNLV and the specific program they are reviewing on the public Institutional Analysis and Planning website.
- 4) A response by the program to the external peer review.
- 5) A final internal report prepared by the Faculty Senate Program Review committee. The program may respond to the report, if desired.

B. Review Criteria

Reports by external reviewers are prepared following UNLV Faculty Senate guidelines covering the following major areas:

- 1) Program Description, Admission Requirements, Budget, Students, Program Curriculum, Degree Requirements, Faculty, Facilities and Support, Student Assessment and Outcomes.
- 2) The final internal review report evaluates the department self-study, on-line surveys, the external review report, the department response to the external review, and determines commendations and recommendations.

C. Data Sources for Section IV

The following describes the specific fields that were used to obtain the data from Datanet for Section IV.

Letter A: Datanet Headcount Trends

Terms: Recent Fall Terms (final), Fall only is used

Cohort: All Students

Measure: Student Headcount

Group by: Level

Criteria: Program Codes Are: PAE, WKFBA, WKFBFS, WKFPRB, WKFPRE, WKFPSA, WKFPSS, WKFSCA, WKFSCS, WKFMED, WKFMS, EDWF, EDW

Letter B: Datanet Degrees Conferred (the most recent year's number can fluctuate as additional degrees are processed and the system is updated)

Academic Year: select each year and record number

Report Type: Totals

Record Type: Degrees Only

Report Columns: Level & Degree

Criteria: Student Department Code Is WKF, EDW

Letter C:

Terms: Recent Fall Terms (Final)

Cohort: All Students

Measure: Enrollments

Group by: Course Prefix

Additional Criteria: Course College is College of Education

III. Major Findings and Conclusions of the Program Review

Commendations

- 1) The program is strong in promoting diversity among both faculty and students, and is particularly strong in serving returning adults. The policy of allowing up to thirty hours of credit for verified work experience positions the WFED program faculty to recruit and enroll working adults. This provides a strong competitive advantage for the recruitment of non-traditional aged students.

2) The program faculty conducts publishable research in the forms of journal articles and other publications. Notably Dr. Gordon has served in many leadership roles in national and international professional organizations such as the Association for Career and Technical Education Research and is currently serve as the editor of the premiere research journal in CTE.

3) The faculty provided evidence they are quite active in the university, college, state and Las Vegas communities.

Recommendations

1) The WFED program is understaffed. The number of faculty would be adequate where it not for two having been assigned other administrative duties. One faculty member is assistant dean full-time and another is department head. With these administrative duties, it leaves only two tenure line faculty who can devote full-time to the degree programs in WFED. The faculty numbers are not adequate for the individual teaching, research, grants and service exceptions for faculty at research universities.

2) The formal assessment of students and the examination of outcomes are not currently occurring in the department at the level they desire. The program faculty recognizes the need for more formal assessment of student outcomes. However, it needs to be noted that with the limited number of faculty assigned full-time to the WFED program area this task would require a great deal of time with the number of the different programs (from non-degree seeking, Bachelors, Masters, and Doctoral) and diverse students the program serves.

3) A source of frustration to the WFED faculty is the failure of institutional research to accurately reflect enrollment numbers because a large proportion of student are not degree candidates but in fact licensure candidates. Thus while they may or may not show up in credit counts and cost per credit hour calculations, they do not show up in degree enrollment numbers. It is to be pointed out that the actual student to faculty ratio of the program was reported by the internal review committee to be at the norm for UNLV and this ratio assumes all faculty members are available to teach a full load which of course, due to administrative assignments, is not a correct assumption.

4) Presently no systematic follow-up is done of graduates. Feedback from students regarding the program curriculum is mostly informal or via UNLV procedures.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

2009-10

37

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>9</u> |
| 2008-09 | <u>7</u> |
| 2009-10 | <u>7</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|-----------|
| Fall 2009 | <u>56</u> |
|-----------|-----------|

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University of Nevada, Reno

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ANNUAL REVIEW OF PROGRAMS

Title 4, Chapter 14, Section 4

Institution: University of Nevada, Reno

Academic Year of Review: 2009-10

I. List the existing programs and corresponding degree level for all programs that were reviewed over the past year (e.g. Economics, Bachelor of Science).

Animal Biotechnology, B.S.
Animal Science, B.S.
Animal Science, M.S.
Biomedical Engineering, M.S.
Biomedical Engineering, Ph.D.
Chemical Engineering, M.S.
Chemical Engineering, Ph.D.
Civil Engineering, M.S.
Civil Engineering, Ph.D.
Computer Engineering, M.S.
Computer Science, M.S.
Computer Science & Engineering, Ph.D.
Electrical Engineering, M.S.
Electrical Engineering, Ph.D.
Materials Science & Engineering, M.S.
Materials Science & Engineering, Ph.D.
Mechanical Engineering, M.S.
Mechanical Engineering, Ph.D.
Nutrition, B.S.
Nutritional Sciences, M.S.
Pre-Veterinary Science, B.S.

II. List any programs and corresponding degree level for all programs that were eliminated or placed on inactive status this past year (e.g. Political Science, Master of Arts).

Agricultural & Applied Economics, B.S.
Animal Biotechnology, B.S.
Animal Science, B.S., M.S.
Counseling & Educational Psychology, Ed.D., Ed.S., Ph.D.
Construction Engineering post-baccalaureate, professional degree
Education Leadership, Ed.D., Ph.D.
Education Specialties, Ed.D., Ph.D.
Environmental & Resource Economics, B.S.
German, B.A.
German Studies, B.A.

Interior Design, B.S.
Literacy Studies, Ed.D., Ph.D.
Resource & Applied Economics, M.S.
Special Education & Disability Studies, Ed.D., Ph.D.
Speech Communications, M.A.
Supply Chain Management, B.S.
Teaching English to Speakers of Other Languages, M.A.

III. List all new programs and corresponding degree level for all programs that received Board approval this past year (e.g. History, Bachelor of Arts).

Nursing Practice, D.N.P., joint program with UNLV

PROGRAM REVIEW

University of Nevada, Reno

Animal Biotechnology, B.S.

I. Description of Program Reviewed

The undergraduate major in Animal Biotechnology was developed to provide students with high quality theoretical and hands-on training in the rapidly evolving field of Biotechnology as it applies to animal science/production and human health. The major areas of Biotechnology covered by faculty within the department are genetics, gene therapy, and stem cell biology and therapies. The curriculum for this major was designed to fulfill the requirements for acceptance to both Medical School and a wide range of Ph.D. programs.

II. Review Process and Criteria

The administration of the College of Agriculture, Biotechnology, and Natural Resources requested a comprehensive review of the Department of Animal Biotechnology and its offerings as part of the process offered by the Cooperative State Research, Education, and Extension Service (CSREES) of the U.S. Department of Agriculture. In addition to assessing the department and each program's strengths and weaknesses, the review team was given some specific areas to assess. In collaboration with CSREES, a team of five external reviewers with knowledge of the field was assembled. A self-study document was prepared and provided to the review team members, and an on-campus visit with faculty, students, staff and cooperators was conducted October 25-28, 2009.

III. Major Findings and Conclusions of the Program Review

The review team concluded that the Animal Biotechnology program is very effective in preparing students for acceptance into veterinary schools. The Range Management option needs more visibility in order to attract more students. There is a difference of opinion in the department whether students who matriculate as pre-veterinary students but do not have the G.P.A. for acceptance into veterinary school should be counseled to switch to the Animal Biotechnology major. The option of completing the requirements for a degree in Animal Biotechnology should be clearly articulated to students who decide not to continue pre-veterinary studies, and more of the most-qualified students should be directed into the Animal Biotechnology major to meet stakeholder needs.

The reviewers did not have an opportunity to meet with any of the students in this program and recommended that the department and college ensure that this does not happen in future reviews. However, in speaking with other undergraduate students and department representatives, the reviewers learned that there is a perception that the requirements for graduation leave little room for electives in the program and that the Core Curriculum courses are time-consuming and not always relevant to their education. The reviewers recommended that as part of strategic planning, the department should more carefully evaluate curriculum requirements for all the Animal Biotechnology majors. The addition of ANSC 101,

Introduction to Biotechnology, as a required course in the freshman year was suggested for all majors.

The method of helping students find internships should be improved. More effort should be made on the part of the department to identify internship opportunities, communicate options for internships for students, and facilitate contact between students and specific stakeholders who have expressed interest in providing internships to UNR students. The staff academic advisor could take a significant role in following students through their internships.

There are two major issues that impact productivity in the Animal Biotechnology programs: attitudinal barriers among the departments and administrative units that affect the ability of the faculty to effectively work together on joint projects and programs, and lack of a long-term vision for the department.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>16</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>0</u> |
| 2008-09 | <u>0</u> |
| 2009-10 | <u>0</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|--|
| Fall 2009 | <u>398 (Note: This figure includes the Animal Science BS and Pre-Veterinary Science BS courses).</u> |
|-----------|--|

PROGRAM REVIEW
University of Nevada, Reno
Animal Science, B.S.

I. Description of Program Reviewed

The undergraduate degree program in Animal Science prepares students in a variety of areas such as managing livestock enterprises, employment with companies providing and marketing livestock, animal feeds and health products, as well as organizations such as breed associations, livestock publications and government agencies. In addition, it prepares students who have a strong interest in attending graduate school or professional veterinary school. Students enrolled in an Animal Science curriculum will receive a strong background in natural and biological sciences that is essential in the understanding of animal production. Individual curricula can be tailored to provide preparation for veterinary school and graduate studies.

II. Review Process and Criteria

The administration of the College of Agriculture, Biotechnology, and Natural Resources requested a comprehensive review of the Department of Animal Biotechnology and its offerings as part of the process offered by the Cooperative State Research, Education, and Extension Service (CSREES) of the U.S. Department of Agriculture. In addition to assessing the department and each program's strengths and weaknesses, the review team was given some specific areas to assess. In collaboration with CSREES, a team of five external reviewers with knowledge of the field was assembled. A self-study document was prepared and provided to the review team members, and an on-campus visit with faculty, students, staff and cooperators was conducted October 25-28, 2009.

III. Major Findings and Conclusions of the Program Review

In general the students spoke positively about their instructors, the quality of their classes and their academic advisor. However, the reviewers shared concerns from students regarding the curriculum, including the perception that the requirements for graduation leave little room for electives, that the Core Curriculum courses are time-consuming and not always relevant to their education in Animal Science, and that they did not understand the potential relevance of biotechnology to their chosen field. The reviewers noted, however, that requirements are very similar to other Animal Science majors in colleges across the Western U.S.

Students felt that interaction among the Animal Science and Animal Biotechnology majors was minimal. They don't know each other or have mutual respect for their fields of study.

Students agreed that that their education would benefit from more opportunities for hands-on work with animals in their courses, and some students felt their courses contained too much theory and not enough applied information. Students indicated that UNR has animal facilities nearby, ranches and land, but they feel that these resources are underutilized in instruction.

There was general agreement that students with an Animal Science degree were less competitive in the job market than students with an Animal Biotechnology degree.

The reviewers recommended that as part of strategic planning, the department should more carefully evaluate curriculum requirements for all the Animal Biotechnology majors. The addition of ANSC 101, Introduction to Biotechnology, as a required course in the freshman year was suggested for all majors.

The method of helping students find internships should be improved. More effort should be made on the part of the department to identify internship opportunities, communicate options for internships for students, and facilitate contact between students and specific stakeholders who have expressed interest in providing internships to UNR students. The staff academic advisor could take a significant role in following students through their internships.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>73</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|-----------|
| 2007-08 | <u>17</u> |
| 2008-09 | <u>24</u> |
| 2009-10 | <u>23</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|--|
| Fall 2009 | <u>398 (Note: This figure includes the Animal Biotechnology BS and Pre-Veterinary Science BS courses.)</u> |
|-----------|--|

PROGRAM REVIEW
University of Nevada, Reno
Animal Science, M.S.

I. Description of Program Reviewed

The Master of Science degree program in Animal Science is designed to provide advanced education focused in areas of animal science, biotechnology and rangeland habitat management. The program is designed both for students wishing to pursue further training in graduate or professional schools and for those individuals who wish to enhance knowledge and practical skills related to employment. There is a thesis option or a professional project option, which enables students to develop knowledge and skills in a specialized area of rangeland and habitat as well as animal science and biotechnology.

II. Review Process and Criteria

The administration of the College of Agriculture, Biotechnology, and Natural Resources requested a comprehensive review of the Department of Animal Biotechnology and its offerings as part of the process offered by the Cooperative State Research, Education, and Extension Service (CSREES) of the U.S. Department of Agriculture. In addition to assessing the department and each program's strengths and weaknesses, the review team was given some specific areas to assess. In collaboration with CSREES, a team of five external reviewers with knowledge of the field was assembled. A self-study document was prepared and provided to the review team members, and an on-campus visit with faculty, students, staff and cooperators was conducted October 25-28, 2009.

III. Major Findings and Conclusions of the Program Review

The review team confirmed that the graduate program helps fulfill the needs of Nevada by contributing to a work force that is trained in modern scientific theory and techniques relevant to animal biotechnology.

There is mutual respect and good integration among the students in this program and in other programs on campus that utilize department faculty as graduate advisors. Students confirmed that they are invited to a monthly seminar where there are presentations on results of research and time to interact. Research being conducted by graduate students covers a wide range of topic areas relevant to the needs of the state. However, it was not clear that all projects involve a clearly designated animal component. The reviewers recommended that faculty ensure that there is such a component in every master's student's project in order to justify the award of a graduate degree in Animal Science or Animal Biotechnology.

Students were concerned about the difficulty they have in fulfilling requirements for 15-18 credits in 700-level courses. They state that there is not a sufficient number of these courses offered in Animal Biotechnology and are also concerned that if they do take a course it is

labeled "Special Topics" on their transcript unless the instructor identifies the topics with the Admissions and Records office. Faculty have agreed to take steps to address this concern.

The reviewers recommended that as part of strategic planning, the department should more carefully evaluate curriculum requirements for all the Animal Biotechnology majors.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>11</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>3</u> |
| 2008-09 | <u>4</u> |
| 2009-10 | <u>5</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|-----------|
| Fall 2009 | <u>19</u> |
|-----------|-----------|

| |
|--|
| <p style="text-align: center;">PROGRAM REVIEW <i>University of Nevada, Reno</i> <i>Biomedical Engineering, M.S.</i></p> |
|--|

I. Description of Program Reviewed

The Department of Electrical and Biomedical Engineering offers an interdisciplinary Master of Science degree in Biomedical Engineering. Currently the program is administered by the Graduate School and is in transition to be administered by the department. Biomedical engineering or "Bioengineering" integrates physical, chemical, or mathematical sciences and engineering principles for the study of biology, medicine, behavior, or health. It advances fundamental concepts, creates knowledge from the molecular to the organ system levels, and develops innovative biologics, materials, processes, implants, devices, and informatics approaches for the prevention, diagnosis, and treatment of disease, for patient rehabilitation, and for improving health. Major sub-disciplines of biomedical engineering include the following: bioinformatics, biophysics, biomechanics, biomaterials, biochemical engineering, agrobioengineering, bioinstrumentation, rehabilitation engineering, and medical engineering. The program provides a fundamental core background in the broad field of biomedical engineering with an additional emphasis on the ability to communicate in the scientific arena (in oral and written forms). Otherwise, the program has a flexible educational curriculum that focuses on the development of the highest quality, competitive biomedical engineering research.

II. Review Process and Criteria

The College of Engineering participated in a comprehensive review of the college's five graduate programs including Biomedical Engineering. In addition to assessing the department and each program's strengths and weaknesses, the review team was given some specific areas to assess. Each program was reviewed independently by an expert in the discipline's specific context. The review committee also met as a group to discuss and identify common challenges faced by all graduate programs in the college. A self-study document was prepared and provided to the review team members, and an on-campus visit with faculty, students, staff and cooperators was conducted August 26-27, 2009.

III. Major Findings and Conclusions of the Program Review

The faculty are dedicated teachers, and the relationship between faculty and graduate students is very good. Alumni speak highly of the department and faculty.

The department's goal to focus on bioengineering/biosensors and biophotonics is a major step in the right direction. Biomedical engineering has the potential to become an economic engine that will attract new biomedical and health-related development to the state over the next 5-10 years.

The reviewer noted that the program is in its early stages of development and not very cohesive. He noted that the department lacks a compelling vision and is not strategically focused. Most of the students commented that they felt lost in the department.

The reviewer recommended that major efforts should be undertaken to double the size of the graduate student body over the next 2-5 years. The college should attract its own senior undergraduate students into the graduate program by developing joint BS/MS programs.

The reviewer strongly recommended the creation of a separate department of Biomedical Engineering within the college over the next two years.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>13</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>1</u> |
| 2008-09 | <u>0</u> |
| 2009-10 | <u>0</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|--|
| Fall 2009 | <u>57</u> (Note: This figure includes all Electrical and Biomedical Engineering graduate courses.) |
|-----------|--|

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW <i>University of Nevada, Reno</i> <i>Biomedical Engineering, Ph.D.</i></p> |
|---|

I. Description of Program Reviewed

The Department of Electrical and Biomedical Engineering offers an interdisciplinary Doctor of Philosophy degree in Biomedical Engineering. Currently the program is administered by the Graduate School and is in transition to be administered by the department. Biomedical engineering or "Bioengineering" integrates physical, chemical, or mathematical sciences and engineering principles for the study of biology, medicine, behavior, or health. It advances fundamental concepts, creates knowledge from the molecular to the organ system levels, and develops innovative biologics, materials, processes, implants, devices, and informatics approaches for the prevention, diagnosis, and treatment of disease, for patient rehabilitation, and for improving health. Major sub-disciplines of biomedical engineering include the following: bioinformatics, biophysics, biomechanics, biomaterials, biochemical engineering, agrobioengineering, bioinstrumentation, rehabilitation engineering, and medical engineering. The program provides a fundamental core background in the broad field of biomedical engineering with an additional emphasis on the ability to communicate in the scientific arena (in oral and written forms). Otherwise the program has a flexible educational curriculum that focuses on the development of the highest quality, competitive biomedical engineering research. In addition to coursework, doctoral students are required to complete several specific requirements prior to graduation. These requirements are intended to: (1) expose students to the wide range of activities in biomedical engineering; (2) develop and improve communication skills in the scientific arena; (3) provide mechanisms to constantly track the progress of individual students and their research activities; and (4) create an environment to help develop the strongest possible research projects and publications.

II. Review Process and Criteria

The College of Engineering participated in a comprehensive review of the college's five graduate programs including Biomedical Engineering. In addition to assessing the department and each program's strengths and weaknesses, the review team was given some specific areas to assess. Each program was reviewed independently by an expert in the discipline's specific context. The review committee also met as a group to discuss and identify common challenges faced by all graduate programs in the college. A self-study document was prepared and provided to the review team members, and an on-campus visit with faculty, students, staff and cooperators was conducted August 26-27, 2009.

III. Major Findings and Conclusions of the Program Review

The faculty are dedicated teachers, and the relationship between faculty and graduate students is very good. Alumni speak highly of the department and faculty.

The department's goal to focus on bioengineering/biosensors and biophotonics is a major step in the right direction. Biomedical engineering has the potential to become an economic engine that will attract new biomedical and health-related development to the state over the next 5-10 years.

The reviewer noted that the program is in its early stages of development and not very cohesive. He noted that the department lacks a compelling vision and is not strategically focused. Most of the students commented that they felt lost in the department.

The reviewer recommended that major efforts should be undertaken to double the size of the graduate student body over the next 2-5 years. The college should attract its own senior undergraduate students into the graduate program by developing joint BS/MS programs.

The reviewer strongly recommended the creation of a separate department of Biomedical Engineering within the college over the next two years.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>23</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>0</u> |
| 2008-09 | <u>1</u> |
| 2009-10 | <u>1</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|---|
| Fall 2009 | <u>57 (Note: This figure includes course enrollments for all electrical and biomedical engineering graduate courses).</u> |
|-----------|---|

PROGRAM REVIEW

*University of Nevada, Reno
Chemical Engineering, M.S.*

I. Description of Program Reviewed

The Master of Science in Chemical Engineering program's educational goals are to provide a quality education that prepares students for the challenges and opportunities presented by modern technical society. Rigorous classroom instruction and laboratory experiences using modern equipment and computers provide broad insight into natural phenomena, technology, chemical and biological process- engineering equipment, and systems engineering. The department only offers a thesis Master's degree. The graduate student's advisor, graduate director of the program and the advisory/examining committee determine the Program of Study for each degree candidate with final approval coming from the Dean of the Graduate School. The Program of Study describes the student's specific courses, research and related activities.

II. Review Process and Criteria

The College of Engineering participated in a comprehensive review of the college's five graduate programs including Chemical Engineering. In addition to assessing the department and each program's strengths and weaknesses, the review team was given some specific areas to assess. Each program was reviewed independently by an expert in the discipline's specific context. The review committee also met as a group to discuss and identify common challenges faced by all graduate programs in the college. A self-study document was prepared and provided to the review team members, and an on-campus visit with faculty, students, staff and cooperators was conducted August 26-27, 2009.

III. Major Findings and Conclusions of the Program Review

The reviewer was impressed by the vision and goals laid out for the college and department by the University and college administrators.

He witnessed the faculty's impressive qualitative and quantitative output. Despite their extensive teaching load and their minimal administrative support, the faculty have been able to attract significant amounts of funding and develop a healthy graduate program.

The reviewer recommended that faculty must urgently engage in a review and revision of both undergraduate and graduate courses being offered as well as degree requirements. The revisions should accomplish the following goals: (1) reduce the number of regular classes each faculty member teaches to one at any given time, thus reducing faculty teaching load; (2) reduce the number of classes required for a degree at both undergraduate and graduate levels; and (3) combine classes with similar content.

The reviewer suggested creating graduate and undergraduate seminar courses, which would provide faculty with teaching credit for weekly research meetings/seminars involving undergraduate and graduate students that carry out research with them.

The reviewer noted that as the department grows it is important to reward research efforts that contribute not only to the department's financial health, but also to its academic visibility because of their high intellectual content.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|----------|
| 2009-10 | <u>9</u> |
|---------|----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>1</u> |
| 2008-09 | <u>2</u> |
| 2009-10 | <u>2</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | | |
|-----------|-----------|---|
| Fall 2009 | <u>17</u> | <u>Note: This number includes enrollments for all chemical engineering graduate courses).</u> |
|-----------|-----------|---|

PROGRAM REVIEW
University of Nevada, Reno
Chemical Engineering, Ph.D.

I. Description of Program Reviewed

The Doctor of Philosophy in Chemical Engineering program's educational goals are to provide a quality education that prepares students for the challenges and opportunities presented by our modern technical society. Rigorous classroom instruction and laboratory experiences using modern equipment and computers provide broad insight into natural phenomena, technology, chemical and biological process- engineering equipment, and systems engineering. The requirements for the Ph.D. program are extensions of the Master's degree. Students form an advisory/examining committee which is very important in guiding their progress toward an advanced degree. Doctoral students must pass a qualifying oral examination administered by the department to assess the student's previous classes, what classes they should take in preparation for the dissertation research, and potential research topics. To gain admission to doctoral candidacy students must pass a comprehensive examination, which is intended to evaluate the student's overall knowledge and understanding of their requirements.

II. Review Process and Criteria

The College of Engineering participated in a comprehensive review of the college's five graduate programs including Chemical Engineering. In addition to assessing the department and each program's strengths and weaknesses, the review team was given some specific areas to assess. Each program was reviewed independently by an expert in the discipline's specific context. The review committee also met as a group to discuss and identify common challenges faced by all graduate programs in the college. A self-study document was prepared and provided to the review team members, and an on-campus visit with faculty, students, staff and cooperators was conducted August 26-27, 2009.

III. Major Findings and Conclusions of the Program Review

The reviewer was impressed by the vision and goals laid out for the college and department by the University and college administrators.

He witnessed the faculty's impressive qualitative and quantitative output. Despite their extensive teaching load and their minimal administrative support, the faculty have been able to attract significant amounts of funding as well as developing a healthy graduate program.

The emphasis of the graduate program must be transformed in as rapid a pace as possible from M.S. degree driven to Ph.D. degree driven.

The reviewer recommended that faculty must urgently engage in a review and revision of both undergraduate and graduate courses being offered as well as degree requirements, with the revisions accomplishing the following goals: (1) reduce the number of regular classes each

faculty member teaches to one at any given time, thus reducing faculty teaching load; (2) reduce the number of classes required for a degree at both undergraduate and graduate levels; and (3) combine classes with similar content.

The reviewer suggested creating graduate and undergraduate seminar courses, which would provide faculty with teaching credit for weekly research meetings/seminars involving undergraduate and graduate students that carry out research with them.

The reviewer noted that as the department grows it is important to reward research efforts that contribute not only to the department's financial health, but also to its academic visibility because of their high intellectual content.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|----------|
| 2009-10 | <u>7</u> |
|---------|----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>0</u> |
| 2008-09 | <u>0</u> |
| 2009-10 | <u>0</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | | |
|-----------|-----------|---|
| Fall 2009 | <u>17</u> | <u>Note: This number includes enrollments for all chemical engineering graduate courses).</u> |
|-----------|-----------|---|

PROGRAM REVIEW

University of Nevada, Reno

Civil Engineering, M.S.

I. Description of Program Reviewed

The department of Civil and Environmental Engineering offers a graduate program leading to the Master of Science degree with a specialty in one of the following sub-disciplines: Environmental Engineering; Geotechnical Engineering; Pavements/Materials Engineering; Structural/Earthquake Engineering; and Transportation Engineering. Students are able to develop their knowledge in any one of the above sub-disciplines by completing a unique program of study. Each program of study includes certain required courses and elective courses, many of which are interdisciplinary, and may also include fundamental or applied research related to the specific sub-discipline. Students may choose between a thesis track or a non-thesis track. The degree program prepares graduates to work as civil and environmental engineers in private practice or in the public sector. Graduates will have the necessary educational background to become licensed professional engineers in accordance with the provisions of the National Council of Examiners for Engineering and Surveying (NCEES). The department administers degrees entitled "Civil Engineering" and "Civil and Environmental Engineering" at both the M.S. and Ph.D. level. While these degrees are considered separately by the UNR Graduate School, the only substantive difference is in the title that will appear on the student's diploma. For the purpose of the review, combined data for the two degree titles were presented.

II. Review Process and Criteria

The College of Engineering participated in a comprehensive review of the college's five graduate programs including Civil and Environmental Engineering. In addition to assessing the department and each program's strengths and weaknesses, the review team was given some specific areas to assess. Each program was reviewed independently by an expert in the discipline's specific context. The review committee also met as a group to discuss and identify common challenges faced by all graduate programs in the college. A self-study document was prepared and provided to the review team members, and an on-campus visit with faculty, students, staff and cooperators was conducted August 26-27, 2009.

III. Major Findings and Conclusions of the Program Review

The reviewer commended the department on the high quality of the overall faculty and research although it is a relatively small program when compared to other research institutions.

In general, graduate courses for the program areas are well organized and diverse. During meetings with current M.S. students and with recent alumni, it was clear to the reviewer that there is a very high level of satisfaction with the quality of education, research and mentoring.

The reviewer suggested increasing the department's faculty size, following the department's updated Strategic Plan for growth. She also suggested decreasing the teaching load for research-active faculty and providing additional course load reduction opportunities for faculty with particularly large research responsibilities.

There is no defined research/graduate program in the water resources area, an area of particular interest for arid regions like Nevada, where faculty research and program graduates will benefit the State. The reviewer noted that the academic collaboration with DRI could be strengthened.

The department needs to develop a recruiting program to increase the number and qualifications of graduate students and also to increase participation of students from underrepresented minority populations. In order to increase the number and qualifications of graduate students, she suggested investing in proactive and targeted recruiting. Another suggestion was to develop support "packages" for highly recruited students using a combination of TAs, RAs, and fellowships as well as engaging current graduate students in recruiting activities.

The number of teaching assistantships needs to be increased, especially to match the considerable research assistantships supported by faculty grants. The department faculty should consider applying for grants that support graduate student research and teaching at the program level.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>48</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|-----------|
| 2007-08 | <u>17</u> |
| 2008-09 | <u>12</u> |
| 2009-10 | <u>16</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|--|
| Fall 2009 | <u>211 (Note: This figure includes all courses at the M.S. and Ph.D. level in the department.)</u> |
|-----------|--|

PROGRAM REVIEW

University of Nevada, Reno

Civil Engineering, Ph.D.

I. Description of Program Reviewed

The department of Civil and Environmental Engineering offers a graduate program that leads to a Ph.D. degree with a specialty in one of the following sub-disciplines: Environmental Engineering; Geotechnical Engineering; Pavements/Materials Engineering; Structural/Earthquake Engineering; and Transportation Engineering. Students are able to develop their knowledge in any one of the above sub-disciplines by completing a unique program of study. Each program of study includes certain required courses and elective courses, many of which are interdisciplinary, and also includes a substantial fundamental research component which is related to their specific sub-discipline. Doctoral students are most often trained to pursue careers involving teaching and research activities at university-level academic institutions or research agencies or to perform specialized design activities at engineering consulting firms. The department administers degrees entitled "Civil Engineering" and "Civil and Environmental Engineering" at both the M.S. and Ph.D. level. While these degrees are considered separate by the UNR Graduate School, the only substantive difference is in the title that will appear on the student's diploma. For the purpose of the review, combined data for the two degree titles were presented.

II. Review Process and Criteria

The College of Engineering participated in a comprehensive review of the college's five graduate programs including Civil and Environmental Engineering. In addition to assessing the department and each program's strengths and weaknesses, the review team was given some specific areas to assess. Each program was reviewed independently by an expert in the discipline's specific context. The review committee also met as a group to discuss and identify common challenges faced by all graduate programs in the college. A self-study document was prepared and provided to the review team members, and an on-campus visit with faculty, students, staff and cooperators was conducted August 26-27, 2009.

III. Major Findings and Conclusions of the Program Review

The reviewer commended the department on the high quality of the overall faculty and research although it is a relatively small program when compared to other research institutions.

In general, graduate courses for the program areas are well organized and diverse. During meetings with current Ph.D. students and with recent alumni, it was clear to the reviewer that there is a very high level of satisfaction with the quality of education, research and mentoring.

The reviewer suggested increasing the department's faculty size, following the department's updated Strategic Plan for growth. She also suggested decreasing the teaching load for

research-active faculty and providing additional course load reduction opportunities for faculty with particularly large research responsibilities.

There is no defined research/graduate program in the water resources area, an area of particular interest for arid regions like Nevada, where faculty research and program graduates will benefit the State. The reviewer noted that the academic collaboration with DRI could be strengthened.

She suggested reducing the coursework requirements for Ph.D. students from 48 units (24 after the M.S.) and to also encourage Ph.D. students to take advantage of courses offered in other departments. Ph.D. course requirements should be compared to those required in Civil and Environmental programs at peer institutions.

The department needs to develop a recruiting program to increase the number and qualifications of graduate students and also to increase participation of students from underrepresented minority populations. In order to increase the number and qualifications of graduate students, the reviewer suggested investing in proactive and targeted recruiting especially at the Ph.D. level. Another suggestion was to develop support "packages" for highly recruited students using a combination of TAs, RAs, and fellowships as well as to engage current graduate students in recruiting activities.

The number of teaching assistantships needs to be increased, especially to match the considerable research assistantships supported by faculty grants. The department faculty should consider applying for grants that support graduate student research and teaching at the program level.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>32</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>2</u> |
| 2008-09 | <u>3</u> |
| 2009-10 | <u>5</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|--|
| Fall 2009 | <u>211 (Note: This figure includes all courses at the M.S. and Ph.D. level in the department.)</u> |
|-----------|--|

PROGRAM REVIEW

University of Nevada, Reno

Computer Engineering, M.S.

I. Description of Program Reviewed

The Department of Computer Science and Engineering offers a Master of Science Degree in Computer Engineering program that deals with the theory, implementation and design of computing, communication hardware, and software systems. The mission of the graduate program is to advance the frontiers of computer science and engineering, to produce qualified individuals in the discipline, and to reach out both within and beyond the university to apply computational principles to technical and societal problems. The graduate student's advisor/examining committee determines the program of study for each degree candidate. Students may choose between a thesis or professional paper track in order to obtain their degree. Courses offered by the department are grouped into four main areas, corresponding to areas of expertise of the faculty members: (1) theory; (2) computer systems; (3) software systems; and (4) intelligent systems.

II. Review Process and Criteria

The College of Engineering participated in a comprehensive review of the college's five graduate programs including Computer Science and Engineering. In addition to assessing the department and each program's strengths and weaknesses, the review team was given some specific areas to assess. Each program was reviewed independently by an expert in the discipline's specific context. The review committee also met as a group to discuss and identify common challenges faced by all graduate programs in the college. A self-study document was prepared and provided to the review team members, and an on-campus visit with faculty, students, staff and cooperators was conducted August 26-27, 2009.

III. Major Findings and Conclusions of the Program Review

Current graduate students had positive things to say about the program. Notable is that students find the faculty to be approachable and easy to communicate with.

Local industry expressed happiness with the quality of the master's level students graduating from the program.

The current approach to graduate recruiting is ad-hoc. The reviewer strongly recommended upgrading recruiting practices in order to compete for good students. Her suggestions included the following: (1) generating letters or emails sent to a managed list of faculty friends at other institutions advertising the department, research areas, and asking friends to recommend UNR for their stronger graduating bachelors degree students; (2) tracking the inquiries and applications of any prospective graduate students that look strong to avoid letting good prospects fall through the cracks; (3) scheduling annual "visit days" for admitted students, with current graduate students organizing some of the events and possibly hosting visitors overnight;

and (4) involving current graduate students in recruiting to promote their deeper engagement and commitment to the community and program.

The reviewer suggested stressing the unique strengths of the program by tailoring the message to different target groups. Different themes could be the strengths in gaming-related technologies or the unique collaborative projects the department is conducting.

The reviewer felt that the department's vision statement needed to be further developed to better convey existing strengths as well as to clarify goals for the future in a manner that sets high standards and makes the department unique in the world.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|--|
| 2009-10 | <u>39</u> (Note: Include Computer Science MS.) |
|---------|--|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>6</u> |
| 2008-09 | <u>2</u> |
| 2009-10 | <u>0</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|---|
| Fall 2009 | <u>129</u> (Note: Includes all graduate courses in the department.) |
|-----------|---|

PROGRAM REVIEW

University of Nevada, Reno

Computer Science, M.S.

I. Description of Program Reviewed

The Department of Computer Science and Engineering offers an integrated course of study covering the theory, implementation, and design of information processing systems for those seeking the degree of Master of Science in Computer Science. The mission of the graduate program is to advance the frontiers of computer science and engineering, to produce qualified individuals in the discipline, and to reach out both within and beyond the university to apply computational principles to technical and societal problems. The graduate student's advisor/examining committee determine the program of study for each degree candidate. Students may choose between a thesis or professional paper track in order to obtain their degree. Courses offered by the department are grouped into four main areas, corresponding to areas of expertise of the faculty members: (1) theory; (2) computer systems; (3) software systems; and (4) intelligent systems.

II. Review Process and Criteria

The College of Engineering participated in a comprehensive review of the college's five graduate programs including Computer Science and Engineering. In addition to assessing the department and each program's strengths and weaknesses, the review team was given some specific areas to assess. Each program was reviewed independently by an expert in the discipline's specific context. The review committee also met as a group to discuss and identify common challenges faced by all graduate programs in the college. A self-study document was prepared and provided to the review team members, and an on-campus visit with faculty, students, staff and cooperators was conducted August 26-27, 2009.

III. Major Findings and Conclusions of the Program Review

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Local industry expressed happiness with the quality of the master's level students graduating from the program.

The current approach to graduate recruiting is ad hoc. The reviewer strongly recommended upgrading recruiting practices in order to compete for good students. Her suggestions include: (1) generating letters or emails sent to a managed list of faculty friends at other institutions advertising the department, research areas, and asking friends to recommend UNR for their stronger graduating bachelors degree students; (2) tracking the inquiries and applications of any prospective graduate students that look strong to avoid letting good prospects fall through the cracks; (3) scheduling annual "visit days" for admitted students, with current graduate students organizing some of the events and possibly hosting visitors overnight; and (4) involving current

graduate students in recruiting to promote their deeper engagement and commitment to the community and program.

The reviewer suggested stressing the unique strengths of the program by tailoring the message to different target groups. Different themes could be the strengths in gaming-related technologies or the unique collaborative projects the department is conducting.

The reviewer felt that the department's vision statement needed to be further developed to better convey existing strengths as well as to clarify goals for the future in a manner that sets high standards and makes the department unique in the world.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|---|
| 2009-10 | <u>39</u> Note: Includes Computer Engineering MS. |
|---------|---|

B. Number of graduates from the program for the following years:

| | |
|---------|-----------|
| 2007-08 | <u>22</u> |
| 2008-09 | <u>13</u> |
| 2009-10 | <u>12</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>129</u> |
|-----------|------------|

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW <i>University of Nevada, Reno</i> <i>Computer Science and Engineering, Ph.D.</i></p> |
|---|

I. Description of Program Reviewed

The Department of Computer Science and Engineering offers an in-depth, cutting edge curriculum for graduate students seeking the degree of Doctor of Philosophy in Computer Science and Engineering. Students are involved in many aspects of research, including publications, presentations, participating in proposal writing and attending departmental colloquia. The mission of the graduate program is to advance the frontiers of computer science and engineering, to produce qualified individuals in the discipline, and to reach out both within and beyond the university to apply computational principles to technical and societal problems. Students who wish to enter the Ph.D. program must possess a Master of Science degree in a related field of study. There are no specific course requirements for the Ph.D. program; however, students should consult their advisor on selecting the appropriate coursework in order to pass the comprehensive Ph.D. examination. An advisory/examining committee is appointed and along with the Graduate Director of the program, is to supervise the student's course of study and examinations. Graduate students must complete a dissertation defense and a set of three comprehensive exams chosen from the following subject areas: (1) theory; (2) applications; (3) software systems; and (4) computer architecture and communications.

II. Review Process and Criteria

The College of Engineering participated in a comprehensive review of the college's five graduate programs including Computer Science and Engineering. In addition to assessing the department and each program's strengths and weaknesses, the review team was given some specific areas to assess. Each program was reviewed independently by an expert in the discipline's specific context. The review committee also met as a group to discuss and identify common challenges faced by all graduate programs in the college. A self-study document was prepared and provided to the review team members, and an on-campus visit with faculty, students, staff and cooperators was conducted August 26-27, 2009.

III. Major Findings and Conclusions of the Program Review

Current graduate students had positive things to say about the program. Notable is that they find the faculty to be approachable and easy to communicate with.

Local industry expressed happiness with the quality of the doctoral students graduating from the program.

The current approach to graduate recruiting is ad-hoc. The reviewer strongly recommended upgrading their recruiting practice in order to compete for good students. Her suggestions include: (1) generating letters or emails sent to a managed list of faculty friends at other institutions advertising the department, research areas, and asking friends to recommend UNR

for their stronger graduating bachelor's degree students; (2) tracking the inquiries and applications of any prospective graduate students that look strong to avoid letting good prospects fall through the cracks; (3) scheduling annual "visit days" for admitted students and having current graduate students organize some of the events and possibly host visitors overnight; and (4) involving current graduate students in recruiting to promote their deeper engagement and commitment to the community and program.

The reviewer suggested stressing the unique strengths of the program and tailoring the message to different target groups. Two themes of these message could be the strengths in gaming-related technologies and the unique collaborative projects the department is conducting.

The reviewer felt that the department's vision statement needed to be further developed to better convey existing strengths as well as to clarify goals for the future in a manner that sets high standards and makes the department unique in the world.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>31</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>2</u> |
| 2008-09 | <u>4</u> |
| 2009-10 | <u>4</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|---|
| Fall 2009 | <u>129 (Note: This figure includes courses at the master's and doctoral level in the department.)</u> |
|-----------|---|

PROGRAM REVIEW

University of Nevada, Reno

Electrical Engineering, M.S.

I. Description of Program Reviewed

The Electrical and Biomedical Engineering Department offers a graduate program leading to the Master of Science degree in Electrical Engineering with focus areas that include the following: power systems, power electronics, control systems, digital signal processing, RF and microwaves, optical communications and optical sensors. The objective of the M.S. program is to prepare students with advanced knowledge and a high quality research background in one of the focus areas so that they have advanced scientific/technical knowledge and the necessary training to pursue careers as engineers in industry, as researchers in national laboratories, or as doctoral students. The program includes advanced level coursework in a student's orientation area and the preparation/defense of an M.S. thesis. Students are encouraged to publish their research results in national/international journals or conference proceedings.

II. Review Process and Criteria

The College of Engineering participated in a comprehensive review of the college's five graduate programs including Electrical Engineering. In addition to assessing the department and each program's strengths and weaknesses, the review team was given some specific areas to assess. Each program was reviewed independently by an expert in the discipline's specific context. The review committee also met as a group to discuss and identify common challenges faced by all graduate programs in the college. A self-study document was prepared and provided to the review team members, and an on-campus visit with faculty, students, staff and cooperators was conducted August 26-27, 2009.

III. Major Findings and Conclusions of the Program Review

The department's goal to focus on renewable/sustainable energy and power systems is a major step in the right direction as is the recent hiring of new, young faculty with excellent credentials. Future new faculty hires should be aligned with existing focus areas to emphasize faculty strengths, such as power systems and electronics.

The faculty are dedicated teachers, and the relationship between faculty and graduate students is very good. Alumni speak highly of the department and faculty.

The reviewer recommended that a major efforts should be undertaken to double the size of the graduate student body over the next 2-5 years. Graduate student enrollments for the program is far below national norms and graduate student recruitment is essentially nonexistent. The reviewer recommended sustained recruiting efforts to increase the size of the graduate student body, including website updating, the preparation of recruiting booklets, and the formation of partnerships with international universities. The department and college should also look to

attract its own senior undergraduate students into the graduate program by developing joint B.S./M.S. programs.

The course curriculum is dated and in need of revision and restructuring. A core set of graduate courses with breadth reflecting the strength of the entire faculty should be offered to create an optimum class size. The reviewer suggested some of the core courses could be co-taught.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>16</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>4</u> |
| 2008-09 | <u>9</u> |
| 2009-10 | <u>5</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|---|
| Fall 2009 | <u>57 (Note: This number includes all master's and doctoral courses in the department.)</u> |
|-----------|---|

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW <i>University of Nevada, Reno</i> <i>Electrical Engineering, Ph.D.</i></p> |
|---|

I. Description of Program Reviewed

The Electrical and Biomedical Engineering Department offers a Doctor of Philosophy degree in Electrical Engineering with focus areas that include the following: power systems, power electronics, control systems, digital signal processing, RF and microwaves, optical communications and optical sensors. The objectives of the Ph.D. program include preparing students with advanced knowledge and a high quality research background in one of the focus areas of the electrical engineering discipline. Upon graduation, students should have advanced scientific/technical knowledge and the necessary training to pursue careers as research engineers in the industry, as scientists in research laboratories, or as faculty members within universities. The doctoral program includes rigorous course work at an advanced level in the student's orientation area and the preparation/defense of a Ph.D. dissertation containing original research work. Ph.D. candidates are encouraged to publish their research results in national/international journals and conference proceedings.

II. Review Process and Criteria

The College of Engineering participated in a comprehensive review of the college's five graduate programs including Electrical Engineering. In addition to assessing the department and each program's strengths and weaknesses, the review team was given some specific areas to assess. Each program was reviewed independently by an expert in the discipline's specific context. The review committee also met as a group to discuss and identify common challenges faced by all graduate programs in the college. A self-study document was prepared and provided to the review team members, and an on-campus visit with faculty, students, staff and cooperators was conducted August 26-27, 2009.

III. Major Findings and Conclusions of the Program Review

The department's goal to focus on renewable/sustainable energy and power systems is a major step in the right direction as is the recent hiring of new, young faculty with excellent credentials. Future new faculty hires should be aligned with existing focus areas to emphasize faculty strengths, such as power systems and electronics.

The faculty are dedicated teachers, and the relationship between faculty and graduate students is very good. Alumni also speak highly of the department and faculty.

The reviewer recommended that a major efforts should be undertaken to double the size of the graduate student body over the next 2-5 years. Graduate student enrollments for the program is far below national norm and graduate student recruitment is essentially nonexistent. The reviewer recommended sustained recruiting efforts to increase the size of the graduate student body, including website updating, the preparation of recruiting booklets, and the formation of

partnerships with international universities. The college should also look to attract its own senior undergraduate students into the graduate program by developing joint BS/MS programs.

The course curricula is dated and in need of revision and restructuring. A core set of graduate courses with breadth reflecting the strength of the entire faculty should be offered to create an optimum class size. The reviewer suggested some of the core courses could be co-taught.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>12</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>0</u> |
| 2008-09 | <u>2</u> |
| 2009-10 | <u>0</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|---|
| Fall 2009 | <u>57 (Note: This number includes all master's and doctoral courses in the department.)</u> |
|-----------|---|

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW <i>University of Nevada, Reno</i> <i>Materials Science and Engineering, M.S.</i></p> |
|---|

I. Description of Program Reviewed

The Master of Science in Materials Science and Engineering program's educational goals are to enable students to apply advance science and engineering principles to materials systems (ceramics, glasses, composites, metals, polymers) in the context of material structure, behavior, processing, and performance. The program prepares students to enter a broad range of engineering careers by providing diversity within the program and opportunity for exploration of different areas such as biotechnology, nanotechnology, ceramics, polymers, and metals. The department only offers a thesis Master's degree. The graduate student's advisor, graduate director of the program and the advisory/examining committee determine the Program of Study for each degree candidate with final approval coming from the Dean of the Graduate School. The Program of Study describes the student's specific courses, research and related activities.

II. Review Process and Criteria

The College of Engineering participated in a comprehensive review of the college's five graduate programs including Materials Science and Engineering. In addition to assessing the department and each program's strengths and weaknesses, the review team was given some specific areas to assess. Each program was reviewed independently by an expert in the discipline's specific context. The review committee also met as a group to discuss and identify common challenges faced by all graduate programs in the college. A self-study document was prepared and provided to the review team members, and an on-campus visit with faculty, students, staff and cooperators was conducted August 26-27, 2009.

III. Major Findings and Conclusions of the Program Review

The reviewer was impressed by the vision and goals laid out for the college and department by the Univeristy and college administrators.

He witnessed the faculty's impressive qualitative and quantitative output. Despite their extensive teaching load and their minimal administrative support, the faculty have been able to attract significant amounts of funding as well as developing a healthy graduate program.

The reviewer recommended that faculty must urgently engage in a review and revision of both undergraduate and graduate courses being offered as well as degree requirements, with the revisions accomplishing the following goals: (1) reduce the number of regular classes each faculty member teaches to one at any given time, thus reducing faculty teaching load; (2) reduce the number of classes required for a degree at both undergraduate and graduate levels; and (3) combine classes with similar content.

The reviewer suggested creating graduate and undergraduate seminar courses, which would provide faculty with teaching credit for weekly research meetings/seminars involving undergraduate and graduate students that carry out research with them.

The reviewer noted that as the department grows it is important to reward research efforts that contribute not only to the department's financial health, but also to its academic visibility because of their high intellectual content.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|----------|
| 2009-10 | <u>7</u> |
|---------|----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>0</u> |
| 2008-09 | <u>5</u> |
| 2009-10 | <u>6</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|---|
| Fall 2009 | <u>64 (Note: This number includes all master's and doctoral level courses in the department.)</u> |
|-----------|---|

PROGRAM REVIEW
University of Nevada, Reno
Materials Science and Engineering, Ph.D.

I. Description of Program Reviewed

The Doctor of Philosophy in Materials Science and Engineering program's educational goals are to enable students to apply advanced science and engineering principles to materials systems (ceramics, glasses, composites, metals, polymers) in the context of material structure, behavior, processing, and performance. The program prepares students to enter a broad range of engineering careers by providing diversity within the program and opportunity for exploration of different areas such as biotechnology, nanotechnology, ceramics, polymers, and metals. The requirements for the Ph.D. program are extensions of the Master's degree. Students form an advisory/examining committee which is very important in guiding their progress toward an advanced degree. Doctoral students must pass a qualifying oral examination administered by the department to assess the student's previous classes, what classes they should take in preparation for the dissertation research, and potential research topics. To gain admission to doctoral candidacy, students must pass a comprehensive examination, which is intended to evaluate the student's overall knowledge and understanding of their requirements.

II. Review Process and Criteria

The College of Engineering participated in a comprehensive review of the college's five graduate programs including Materials Science and Engineering. In addition to assessing the department and each program's strengths and weaknesses, the review team was given some specific areas to assess. Each program was reviewed independently by an expert in the discipline's specific context. The review committee also met as a group to discuss and identify common challenges faced by all graduate programs in the college. A self-study document was prepared and provided to the review team members, and an on-campus visit with faculty, students, staff and cooperators was conducted August 26-27, 2009.

III. Major Findings and Conclusions of the Program Review

The reviewer was impressed by the vision and goals laid out for the college and department by the University and college administrators.

He witnessed the faculty's impressive qualitative and quantitative output. Despite their extensive teaching load and their minimal administrative support, the faculty have been able to attract significant amounts of funding as well as developing a healthy graduate program.

The emphasis of the graduate program must be transformed in as rapid a pace as possible from M.S. degree driven to Ph.D. degree driven.

The reviewer recommended that faculty must urgently engage in a review and revision of both undergraduate and graduate courses being offered as well as degree requirements with revisions accomplishing the following goals: (1) reduce the number of regular classes each faculty member teaches to one at any given time, thus reducing faculty teaching load; (2) reduce the number of classes required for a degree at both undergraduate and graduate levels; and (3) combine classes with similar content.

The reviewer suggested creating graduate and undergraduate seminar courses, which would provide faculty with teaching credit for weekly research meetings/seminars involving undergraduate and graduate students that carry out research with them.

The reviewer noted that as the department grows it is important to reward research efforts that contribute not only to the department's financial health, but also to its academic visibility because of their high intellectual content.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|----------|
| 2009-10 | <u>6</u> |
|---------|----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>0</u> |
| 2008-09 | <u>4</u> |
| 2009-10 | <u>2</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|---|
| Fall 2009 | <u>64 (Note: This figure includes all master's and doctoral level courses in the department.)</u> |
|-----------|---|

| |
|--|
| <p style="text-align: center;">PROGRAM REVIEW <i>University of Nevada, Reno</i> <i>Mechanical Engineering, M.S.</i></p> |
|--|

I. Description of Program Reviewed

The Master of Science in Mechanical Engineering program strives to offer high-quality advanced degrees in the field of mechanical engineering such that graduates are competitive nationally and internationally as well as contribute to the advancement and dissemination of knowledge in the field and related disciplines. The primary administrative unit of the graduate program is the individual student's thesis committee which is responsible for approving the course of study and research and consists of at least three graduate faculty members (two from the department and one from another program serving as the Graduate School representative). Graduate study generally follows one of two broad sub-disciplines: (1) solid mechanics/dynamics; and (2) fluid and thermal sciences. Course offerings are determined by faculty based on student demand and previous course listings. Students may choose between a thesis or non-thesis track for the Master of Science degree.

II. Review Process and Criteria

The College of Engineering participated in a comprehensive review of the college's five graduate programs including Mechanical Engineering. In addition to assessing the department and each program's strengths and weaknesses, the review team was given some specific areas to assess. Each program was reviewed independently by an expert in the discipline's specific context. The review committee also met as a group to discuss and identify common challenges faced by all graduate programs in the college. A self-study document was prepared and provided to the review team members, and an on-campus visit with faculty, students, staff and cooperators was conducted August 26-27, 2009.

III. Major Findings and Conclusions of the Program Review

Faculty and staff in the department are highly dedicated and professional. They are working at a high level and are delivering a quality graduate program. However, growth in student enrollment is creating a strain on classrooms and labs.

The number of graduate courses appears to be adequate to support graduate student education; however, both faculty and students commented that they would like to offer more courses at the 700 level even with high teaching loads. The reviewer suggested reducing the normal teaching load and identifying service courses that could be shared with other departments.

All graduates from the department have historically found employment in industry or at other institutions of higher education.

Students were concerned that written policies and procedures for all program requirements (comprehensive exams, thesis/dissertation defenses, Ph.D. qualifying exam) are either not

available or are unknown to them. The reviewer agreed and recommended placing these important documents on the department website or offering a formal orientation for new graduate students.

Faculty were desirous of more qualified graduate students, but no organized recruitment effort is in place. The reviewer recommended creating recruitment activities such as seminars and a luncheon for outstanding seniors to increase the number of graduate school applicants from the department's undergraduate population. Female representation in the graduate population, while low, is comparable to national norms in similar programs.

The reviewer suggested developing a strategic plan if one was not already in place with emphasis placed on desired areas of growth as opportunities arise to expand the number of faculty.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>25</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|-----------|
| 2007-08 | <u>14</u> |
| 2008-09 | <u>8</u> |
| 2009-10 | <u>13</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|---|
| Fall 2009 | <u>120 (Note: This figure includes all courses at the master's and doctoral level in the department).</u> |
|-----------|---|

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW <i>University of Nevada, Reno</i> <i>Mechanical Engineering, Ph.D.</i></p> |
|---|

I. Description of Program Reviewed

The Doctor of Philosophy in Mechanical Engineering program strives to offer high-quality advanced degrees in the field of mechanical engineering such that graduates are competitive nationally and internationally as well as contribute to the advancement and dissemination of knowledge in the field and related disciplines. The primary administrative unit of the graduate program is the individual student's dissertations committee which is responsible for approving the course of study and research and consists of at least five graduate faculty members (three from the department and two external at-large faculty members). Graduate study generally follows one of two broad sub-disciplines: (1) solid mechanics/dynamics; and (2) fluid and thermal sciences. Course offerings are determined by faculty, based on student demand and previous course listings. All Ph.D. students are required to pass a written qualifying examination (Fundamentals of Engineering administered by the American Society for Engineering Education) before being admitted to candidacy. In order to graduate Ph.D. students must pass a comprehensive examination, complete a dissertation, and pass an oral examination before their committee and public.

II. Review Process and Criteria

The College of Engineering participated in a comprehensive review of the college's five graduate programs including Mechanical Engineering. In addition to assessing the department and each program's strengths and weaknesses, the review team was given some specific areas to assess. Each program was reviewed independently by an expert in the discipline's specific context. The review committee also met as a group to discuss and identify common challenges faced by all graduate programs in the college. A self-study document was prepared and provided to the review team members, and an on-campus visit with faculty, students, staff and cooperators was conducted August 26-27, 2009.

III. Major Findings and Conclusions of the Program Review

Faculty and staff in the department are highly dedicated and professional. They are working at a high level and are delivering a quality graduate program. However, growth in student enrollment is creating a strain on classrooms and labs.

Students were satisfied with the level of instruction, but concerned about the availability of course offerings. The number of graduate courses appears to be adequate to support graduate student education; however, both faculty and students commented that they would like to offer more courses at the 700 level even with high teaching loads. The reviewer suggested reducing the normal teaching load to three courses per year as well as identifying service courses that could be shared with other departments.

All graduates from the department have historically found employment in industry or at other institutions of higher education.

Students were concerned that written policies and procedures for all program requirements (comprehensive exams, thesis/dissertation defenses, Ph.D. qualifying exam) are either not available or are unknown to them. The reviewer agreed and recommended placing these important documents on the department website or offering a formal orientation for new graduate students.

The reviewer strongly recommended eliminating the Fundamentals of Engineering Exam as a replacement for the Ph.D. qualifying exam.

Faculty were desirous of more qualified graduate students, but no organized recruitment effort is in place. The reviewer recommended creating recruitment activities such as seminars and a luncheon for outstanding seniors, to increase the number of grad school applicants from the department's undergraduate population. Female representation in the graduate population, while low, is comparable to national norms in similar programs.

The reviewer suggested developing a strategic plan if one was not already in place with emphasis placed on desired areas of growth as opportunities arise to expand the number of faculty.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>20</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>0</u> |
| 2008-09 | <u>2</u> |
| 2009-10 | <u>4</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|---|
| Fall 2009 | <u>120 (Note: This figure includes all courses at the master's and doctoral level in the department.)</u> |
|-----------|---|

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW <i>University of Nevada, Reno</i> <i>Nutrition, B.S.</i></p> |
|---|

I. Description of Program Reviewed

Students in the Nutrition undergraduate degree program select from two tracks: Dietetics or Nutritional Sciences. The Nutritional Sciences track is designed to prepare students for graduate research in nutritional sciences or for entry into a professional school in health care such as medicine, dentistry and pharmacy and for application of nutritional principles in these health professions or in teaching and research in academic institutions. With a degree in nutritional sciences, graduates will join a network of professionals who provide a link between food producers and food consumers and between diet and health. The Dietetics specialization offers students interested in becoming registered dietitians a Didactic Program in Dietetics (DPD). The DPD program provides students with a broad range of challenging experiences in the classroom, laboratory and in the community as preparation for careers in hospitals, community agencies, the fitness industry and other entities working as professionals equipped to help address the health needs of diverse populations through nutritional interventions and education. The DPD program also prepares students for the second step in becoming a registered dietitian – dietetic internship. Upon completion of the internship, students are prepared to take the Registered Dietician Examination.

II. Review Process and Criteria

The administration of the College of Agriculture, Biotechnology, and Natural Resources requested a comprehensive review of the Department of Nutrition and its offerings as part of the process offered by the Cooperative State Research, Education, and Extension Service (CSREES) of the U.S. Department of Agriculture. In addition to assessing the department and each program's strengths and weaknesses, the review team was given some specific areas to assess. In collaboration with CSREES, a team of five external reviewers with knowledge of the field was assembled. A self-study document was prepared and provided to the review team members, and an on-campus visit with faculty, students, staff and cooperators was conducted February 22-25, 2010.

III. Major Findings and Conclusions of the Program Review

Both the Nutritional Sciences and the Didactic Program in Dietetics tracks are strong programs and well grounded in the basic sciences. There are a significant number of higher level chemistry and other science courses in the program. Students were complimentary of the medical nutrition therapy and life cycle courses. The Nutritional Sciences track is particularly popular and meets the needs of students applying to professional programs. Enrollment in both tracks has increased 135% since 2000.

All faculty in the department are involved in teaching the nutrition professional courses and all appear to be dedicated to teaching quality courses. The faculty are generating large numbers of

Student FTE, are advising all their undergraduate students, and are providing nutrition information for students in other health care profession majors on campus. The reviewers recommended that the department find efficiencies in teaching using its full-time faculty, especially if a primary goal of the department is to grow the research program. Suggestions for accomplishing this were provided in the external review report. The review team also supported the model used by other departments of having a professional advisor for freshman and sophomore students with faculty assuming the advising responsibility at the junior level.

The department was advised to devote more attention to offering affordable, high-quality foods courses that are part of the Didactic Program in Dietetics. Currently, there appears to be a limited amount of laboratory instruction provided to reinforce the foods component. The department also uses Letter of Appointment (LOA) faculty to deliver instruction in these courses on an ongoing or permanent basis. The reviewers suggested that LOAs may be better utilized in courses such as food and culture and non-major nutrition that are not critical for accreditation.

The review team noted that the department will have difficulty meeting the new Commission on Accreditation for Dietetics Education requirement that 60% of students declaring dietetics as a major be accepted into CADE approved internships. Therefore, they recommended the adoption of a two-step selection process for the program, by which students initially enroll as pre-dietetics majors. Those students meeting certain prerequisites and desiring an internship early in their education would declare their intention and be admitted into the dietetic track.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|------------|
| 2009-10 | <u>203</u> |
|---------|------------|

B. Number of graduates from the program for the following years:

| | |
|---------|-----------|
| 2007-08 | <u>24</u> |
| 2008-09 | <u>39</u> |
| 2009-10 | <u>37</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>831</u> |
|-----------|------------|

PROGRAM REVIEW

University of Nevada, Reno

Nutritional Sciences, M.S.

I. Description of Program Reviewed

The primary purpose of the Master of Science in Nutrition is to prepare students for careers in nutrition research and to advance the knowledge of dietetics professionals. Specific goals include (1) strengthening and advancing core nutrition knowledge so that students are competent in the areas of nutritional biochemistry and metabolism, and have an in-depth understanding of clinical and epidemiological applications of this knowledge as it relates to nutrition status assessment, and the prevention and treatment of disease; (2) providing opportunities so that students may develop proficiency in a more defined area of specialization that link nutrition with other biological or behavioral disciplines; and (3) results in an in-depth understanding of nutrition research and related specific methods/techniques such that students are capable of critically evaluating research and engaging in the specific process themselves. Students can select between a thesis and a non-thesis option.

II. Review Process and Criteria

The administration of the College of Agriculture, Biotechnology, and Natural Resources requested a comprehensive review of the Department of Nutrition and its offerings as part of the process offered by the Cooperative State Research, Education, and Extension Service (CSREES) of the U.S. Department of Agriculture. In addition to assessing the department and each program's strengths and weaknesses, the review team was given some specific areas to assess. In collaboration with CSREES, a team of five external reviewers with knowledge of the field was assembled. A self-study document was prepared and provided to the review team members, and an on-campus visit with faculty, students, staff and cooperators was conducted February 22-25, 2010.

III. Major Findings and Conclusions of the Program Review

The current course work is adequate in further preparing students for careers in nutrition or for more advanced training. The program and faculty have an excellent reputation on campus which is attributable to the high quality of their research projects as well as their commitment to quality research training for their students. Additional strengths of the program are the diversity of the graduate student body and the satisfaction of alumni as noted from alumni survey results.

There is a limited number of graduate students. Students view this positively because it allows greater contact and the formation of relationships among the graduate students with the faculty at large as well as with their thesis advisors. However, the reviewers encouraged the department to develop goals for increasing the size of the graduate program by focusing and targeting their recruitment efforts. They recommended that University and College recruitment efforts be set as a priority for the M.S. program in Nutrition. Suggestions included recruiting

students who have applied for the department's Dietetic Internship program; recruiting from the large number of undergraduate students in the department; and, encouraging practicing Registered Dietitians in Nevada to enter the program. Once the program has started to grow, the faculty must work together to support each other and their graduate students.

Although the review team commended the Graduate Program Director for the considerable effort that has been expended in recruitment, they suggest that the recruitment efforts need to be focused and targeted so they will not miss those students whose interests align well with the mission of the program.

The review recommended the department develop the goal of eventually offering a Ph.D. program.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|----------|
| 2009-10 | <u>8</u> |
|---------|----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>1</u> |
| 2008-09 | <u>1</u> |
| 2009-10 | <u>2</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|-----------|
| Fall 2009 | <u>20</u> |
|-----------|-----------|

PROGRAM REVIEW

University of Nevada, Reno

Pre-Veterinary Science, B.S.

I. Description of Program Reviewed

The Pre-Veterinary program is designed to meet the requirements for professional veterinary school. The required course work may be completed in 5 or 6 semesters depending on the ability of the student and professional school requirements. If a student is accepted by a professional school in their third year of the undergraduate program, the student can transfer the first year credits of professional school back to UNR and receive a B.S. degree in Animal Science with the Pre-Veterinary requirements counted towards the Animal Science degree. UNR students are accepted into professional veterinary schools at a rate higher than the national average.

II. Review Process and Criteria

The administration of the College of Agriculture, Biotechnology, and Natural Resources requested a comprehensive review of the Department of Animal Biotechnology and its offerings as part of the process offered by the Cooperative State Research, Education, and Extension Service (CSREES) of the U.S. Department of Agriculture. In addition to assessing the department and each program's strengths and weaknesses, the review team was given some specific areas to assess. In collaboration with CSREES, a team of five external reviewers with knowledge of the field was assembled. A self-study document was prepared and provided to the review team members, and an on-campus visit with faculty, students, staff and cooperators was conducted October 25-28, 2009.

III. Major Findings and Conclusions of the Program Review

In general the students spoke positively about their instructors, the quality of their classes and their academic advisor. Students agreed that they felt they would benefit from more opportunities for hands-on work with animals in their courses, and some students felt their courses contained too much theory and not enough applied information. Students indicated that UNR has animal facilities nearby, both ranches and land, but they feel that these resources are underutilized in instruction. Students also stated they would like to have the opportunity for more in-depth study of small companion animals. Although a class exists (VM 200), it appears to be an elective and may be difficult for students to fit into their schedules.

The reviewers shared concerns from students regarding the curriculum, including the perception that the requirements for graduation leave little room for electives, that the Core Curriculum courses are time-consuming and not always relevant to their education. The reviewers recommended that as part of strategic planning, the department should carefully evaluate the curriculum requirements for all its majors. The addition of ANSC 101, Introduction to Biotechnology, as a required course in the freshman year was suggested.

The reviewers noted some differing opinions in the department regarding how students who will not be accepted into a professional veterinary program should be counseled regarding their degree options. This issue should be resolved so that students receive consistent advice from faculty and advisors.

The method of helping students find internships should be improved. More effort should be made on the part of the department to identify internship opportunities, communicate options for internships for students, and facilitate contact between students and specific stakeholders who have expressed interest in providing internships to UNR students. The staff academic advisor could take a significant role in following students through their internships.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|------------|
| 2009-10 | <u>102</u> |
|---------|------------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>1</u> |
| 2008-09 | <u>0</u> |
| 2009-10 | <u>1</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|--|
| Fall 2009 | <u>398 (Note: This figure includes the Animal Science BS and Pre-Veterinary Science BS courses.)</u> |
|-----------|--|

Nevada State College

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ANNUAL REVIEW OF PROGRAMS

Title 4, Chapter 14, Section 4

Institution: Nevada State College

Academic Year of Review: 2009-10

In 1997, the Nevada Legislature determined that southern Nevada needed additional educational opportunities for its growing population. Five years later, Nevada State College (NSC) opened its doors to over 150 students. Student enrollment numbers reached 2,500 in Fall 2009. As enrollment increases, the number of academic programs offered continues to grow. NSC now offers twenty-seven degree programs. This increase in program offerings demonstrates the college's motivation to meet the needs of the region in developing academic programs. At this time, none of its existing programs are up for review. The first ten year review of academic programs at NSC will not occur until 2012.

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College of Southern Nevada

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ANNUAL REVIEW OF PROGRAMS

Title 4, Chapter 14, Section 4

Institution: College of Southern Nevada

Academic Year of Review: 2009-10

I. List the existing programs and corresponding degree level for all programs that were reviewed over the past year (e.g. Economics, Bachelor of Science).

Air Conditioning Technology, A.A.S.
Air Conditioning Technology, Certificate of Achievement
Architectural Design Technology, A.A.S.
Architectural Design Technology, Certificate of Achievement
Automotive Technology, A.A.S.
Automotive Technology, Certificate of Achievement
Aviation Technology, A.A.S.
Building Technology, A.A.S.
Building Technology, Certificate of Achievement
CADD Technology, A.A.S.
CADD Technology, Certificate of Achievement
Computing and Information Technology, A.A.S.
Computing and Information Technology, Certificate of Achievement
Diesel Heavy Equipment Master Technician, A.A.S.
Diesel Heavy Equipment Maintenance Technician, Certificate of Achievement
Electronic Engineering Technology, A.A.S.
Electronic Engineering Technology, Certificate of Achievement
Environmental Safety and Health, A.A.S.
Environmental Safety and Health, Certificate of Achievement
Graphic Technology, A.A.S.
Graphic Technology, Certificate of Achievement
Mechanical Technology, A.A.S.
Mechanical Technology, Certificate of Achievement
Ornamental Horticulture, A.A.S.
Ornamental Horticulture, Certificate of Achievement
Ornamental Horticulture/Environmental Horticulture, A.S.
Photography, A.A.S.
Photography, Certificate of Achievement
Welding Technology, A.A.S.
Welding Technology, Certificate of Achievement

II. List any programs and corresponding degree level for all programs that were eliminated or placed on inactive status this past year (e.g. Political Science, Master of Arts).

Computing and Information Technology, Certificate of Achievement

Graphic Technology, A.A.S.

Graphic Technology, Certificate of Achievement

III. List all new programs and corresponding degree level for all programs that received Board approval this past year (e.g. History, Bachelor of Arts).

none

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| <p style="text-align: center;">PROGRAM REVIEW <i>College of Southern Nevada</i> <i>Air Conditioning Technology, A.A.S.</i></p> |
|---|

I. Description of Program Reviewed

The mission of the Air Conditioning Technology Program at the College of Southern Nevada is to prepare professionals to function effectively within today's climate of diversity and rapid change. The AC Technology Program will continue to be a leader in providing educational excellence in a respectful and professionally nurturing environment. The Program will maintain close contact with the community and industry of Southern Nevada, and will be responsive to their needs while raising their aspirations for the highest quality in technical education. The Program will be recognized for excellence in teaching and learning, and will be seen as providing an essential service to its students, industry, and the community as a whole.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated. This program is accredited by the Partnership for Air Conditioning Heating Refrigeration Accreditation (PAHRA) and curriculum standards are developed from industry certification criteria.

III. Major Findings and Conclusions of the Program Review

The extensive review of our program and facilities required by our recent accreditation visit has revealed a number of areas of potential weakness to be addressed in our advisory committee meetings in Fall of 2007 (no meetings are scheduled during the summer due to instructing staff contracts as well as HVAC/R industry partner reduced availability during this time). The four students who failed the Industry Competency Examination this year all lacked experience in the HVAC/R field, and three of them speak English as a second language, which may be an additional factor in their failure. Statements concerning availability of tutoring, retention services, and ESL classes are present in all course syllabi, but instructors and staff will be advised to be sensitive to any potential difficulties in student comprehension so that assistance may be rendered at the earliest possible point in a student's course path. Industry advances observed during the HVAC/R and Plumbing Instructor Workshop in Lansdowne, Virginia from March 28-30 this year as well as at the National SkillsUSA Championships this week demonstrate the necessity of ensuring lab equipment used in the Program is kept up-to-date so that our students do not fall behind. Additionally, staff must keep abreast of all advances so that current information is disseminated to all students.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>97</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>4</u> |
| 2008-09 | <u>6</u> |
| 2009-10 | <u>5</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>263</u> |
|-----------|------------|

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW College of Southern Nevada <i>Air Conditioning Technology, Certificate of Achievement</i></p> |
|---|

I. Description of Program Reviewed

The mission of the Air Conditioning Technology Program at the College of Southern Nevada is to prepare professionals to function effectively within today's climate of diversity and rapid change. The AC Technology Program will continue to be a leader in providing educational excellence in a respectful and professionally nurturing environment. The Program will maintain close contact with the community and industry of Southern Nevada, and will be responsive to their needs while raising their aspirations for the highest quality in technical education. The Program will be recognized for excellence in teaching and learning, and will be seen as providing an essential service to its students, industry, and the community as a whole.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated. This program is accredited by the Partnership for Air Conditioning Heating Refrigeration Accreditation (PAHRA) and curriculum standards are developed from industry certification criteria.

III. Major Findings and Conclusions of the Program Review

The extensive review of our program and facilities required by our recent accreditation visit has revealed a number of areas of potential weakness to be addressed in our advisory committee meetings in Fall of 2007 (no meetings are scheduled during the summer due to instructing staff contracts as well as HVAC/R industry partner reduced availability during this time). The four students who failed the Industry Competency Examination this year all lacked experience in the HVAC/R field, and three of them speak English as a second language, which may be an additional factor in their failure. Statements concerning availability of tutoring, retention services, and ESL classes are present in all course syllabi, but instructors and staff will be advised to be sensitive to any potential difficulties in student comprehension so that assistance may be rendered at the earliest possible point in a student's course path. Industry advances observed during the HVAC/R and Plumbing Instructor Workshop in Lansdowne, Virginia from March 28-30 this year as well as at the National SkillsUSA Championships this week demonstrate the necessity of ensuring lab equipment used in the Program is kept up-to-date so that our students do not fall behind. Additionally, staff must keep abreast of all advances so that current information is disseminated to all students.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>97</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>3</u> |
| 2008-09 | <u>3</u> |
| 2009-10 | <u>7</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>263</u> |
|-----------|------------|

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW <i>College of Southern Nevada</i> <i>Architectural Design Technology, A.A.S.</i></p> |
|---|

I. Description of Program Reviewed

The mission of the Architectural Design Technologies program is to provide students with the educational experiences and confidence to attain a meaningful career as an Architectural Residential Designer, Interior Designer, or Architectural Draftsman; to stay current with up-to-date technology used in the Design profession, and to maintain close contact with the community and the Architectural, Residential, and Interior Design profession of Southern Nevada and be responsive to their needs.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated. This program curriculum standards are developed from American Institute of Architects criteria.

III. Major Findings and Conclusions of the Program Review

As the ADT program moves forward the primary goal is restructuring the program to obtain articulation with the UNLV School of Architecture as well as other regional universities. This will provide CSN students with the greatest number of career options. In addition a concentrated effort is being made to accommodate the continuing education needs of the professional community currently practicing in Southern Nevada. This strategy has two goals one to attract the profession back to the college, and two to provide our current students with networking opportunities. The success of the program will benefit from a highly involved professional community. In order to meet these goals the following action items have been developed.

Restructure the first year of both the INTD and ADT programs into fundamentals of design curriculum. This can be achieved by some courses currently taught at CSN and adding some courses taught at UNLV.

Begin to offer more courses that address current needs of the industry. The ADT program has been successful in offering a number of special topic courses gear toward industry specific skills.

Increase recruiting by working with the Clark County School District to create head start programs aimed at students interested in architecture, residential, and interior design. Conversations with the Advanced Technologies Academy are in the preliminary stages.

Increase retention by offering valuable and relevant skills and education, and offering students the opportunity to transfer to regional four-year programs in architecture and interior design.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|------------|
| 2009-10 | <u>140</u> |
|---------|------------|

B. Number of graduates from the program for the following years:

| | |
|---------|-----------|
| 2007-08 | <u>4</u> |
| 2008-09 | <u>15</u> |
| 2009-10 | <u>5</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>265</u> |
|-----------|------------|

PROGRAM REVIEW

College of Southern Nevada

Architectural Design Technology, Certificate of Achievement

I. Description of Program Reviewed

The mission of the Architectural Design Technologies program is to provide students with the educational experiences and confidence to attain a meaningful career as an Architectural Residential Designer, Interior Designer, or Architectural Draftsman; to stay current with up-to-date technology used in the Design profession, and to maintain close contact with the community and the Architectural, Residential, and Interior Design profession of Southern Nevada and be responsive to their needs.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated. This program curriculum standards are developed from American Institute of Architects criteria.

III. Major Findings and Conclusions of the Program Review

As the ADT program moves forward the primary goal is restructuring the program to obtain articulation with the UNLV School of Architecture as well as other regional universities. This will provide CSN students with the greatest number of career options. In addition a concentrated effort is being made to accommodate the continuing education needs of the professional community currently practicing in Southern Nevada. This strategy has two goals one to attract the profession back to the college, and two to provide our current students with networking opportunities. The success of the program will benefit from a highly involved professional community. In order to meet these goals the following action items have been developed.

Restructure the first year of both the INTD and ADT programs into fundamentals of design curriculum. This can be achieved by some courses currently taught at CSN and adding some courses taught at UNLV.

Begin to offer more courses that address current needs of the industry. The ADT program has been successful in offering a number of special topic courses gear toward industry specific skills.

Increase recruiting by working with the Clark County School District to create head start programs aimed at students interested in architecture, residential, and interior design. Conversations with the Advanced Technologies Academy are in the preliminary stages.

Increase retention by offering valuable and relevant skills and education, and offering students the opportunity to transfer to regional four-year programs in architecture and interior design.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|----------|
| 2009-10 | <u>1</u> |
|---------|----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>0</u> |
| 2008-09 | <u>0</u> |
| 2009-10 | <u>0</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>165</u> |
|-----------|------------|

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW <i>College of Southern Nevada</i> <i>Automotive Technology, A.A.S.</i></p> |
|---|

I. Description of Program Reviewed

This program's mission is to prepare students to successfully enter the workforce as competent, ethical, entry level automotive technicians, with demonstrated skill ability in the automotive field.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated. This program is accredited by the National Automotive Technician Education Foundation (NATEF) a division of ASE and curriculum standards are developed from ASE certification criteria.

III. Major Findings and Conclusions of the Program Review

The Automotive programs benefit from the best quality building facilities in the Department of Applied Technology, as well as having a higher full-time staff to student ratio. The current budget crisis in Nevada has placed a hold on the planned continued expansion of Automotive facilities. While the program is expensive to run, no other institution in our area has an equivalent offering in this essential field.

Some of the challenges noted in the Automotive Program Review are common to most programs in Applied Technology. Retention and graduation rates are hindered by the fact that many students enroll in specific courses only, in order to fill a gap in their vocational skill set; others choose to leave prior to graduation once they realize they can obtain excellent employment with the knowledge they have gained in their early courses. Our collective challenge in the Department has been to find ways of demonstrating the added value of a completed degree to our students and our community. Recently, as a result of our worsening economy, more students are asking how they can differentiate themselves from others in their field in order to gain or retain employment. Additionally, more and more employers are seeking higher qualifications for potential hires. This translates to greater importance for degrees and certifications, which only the best educational programs—such as those here at CSN—can provide.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

2009-10

294

B. Number of graduates from the program for the following years:

| | |
|---------|-----------|
| 2007-08 | <u>14</u> |
| 2008-09 | <u>14</u> |
| 2009-10 | <u>11</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>647</u> |
|-----------|------------|

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW <i>College of Southern Nevada</i> <i>Automotive Technology, Certificate of Achievement</i></p> |
|---|

I. Description of Program Reviewed

This program's mission is to prepare students to successfully enter the workforce as competent, ethical, entry level automotive technicians, with demonstrated skill ability in the automotive field.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated. This program is accredited by the National Automotive Technician Education Foundation (NATEF) a division of ASE and curriculum standards are developed from ASE certification criteria.

III. Major Findings and Conclusions of the Program Review

The Automotive programs benefit from the best quality building facilities in the Department of Applied Technology, as well as having a higher full-time staff to student ratio. The current budget crisis in Nevada has placed a hold on the planned continued expansion of Automotive facilities. While the program is expensive to run, no other institution in our area has an equivalent offering in this essential field.

Some of the challenges noted in the Automotive Program Review are common to most programs in Applied Technology. Retention and graduation rates are hindered by the fact that many students enroll in specific courses only, in order to fill a gap in their vocational skill set; others choose to leave prior to graduation once they realize they can obtain excellent employment with the knowledge they have gained in their early courses. Our collective challenge in the Department has been to find ways of demonstrating the added value of a completed degree to our students and our community. Recently, as a result of our worsening economy, more students are asking how they can differentiate themselves from others in their field in order to gain or retain employment. Additionally, more and more employers are seeking higher qualifications for potential hires. This translates to greater importance for degrees and certifications, which only the best educational programs—such as those here at CSN—can provide.

The Automotive and Collision programs benefit from the best quality building facilities in the Department of Applied Technology, as well as having a higher full-time staff to student ratio. The current budget crisis in Nevada has placed a hold on the planned continued expansion of Automotive facilities. While the program is expensive to run, no other institution in our area has an equivalent offering in this essential field. The Collision program is relatively new and still in its growth phase.

Retention and graduation rates are hindered by the fact that many students enroll in specific courses only, in order to fill a gap in their vocational skill set; others choose to leave prior to graduation once they realize they can obtain excellent employment with the knowledge they have gained in their early courses. Our collective challenge in the Department has been to find ways of demonstrating the added value of a completed degree to our students and our community. Recently, as a result of our worsening economy, more students are asking how they can differentiate themselves from others in their field in order to gain or retain employment. Additionally, more and more employers are seeking higher qualifications for potential hires. This translates to greater importance for degrees and certifications, which only the best educational programs—such as those here at CSN—can provide.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>87</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>2</u> |
| 2008-09 | <u>5</u> |
| 2009-10 | <u>7</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>771</u> |
|-----------|------------|

PROGRAM REVIEW
College of Southern Nevada
Aviation Technology, A.A.S.

I. Description of Program Reviewed

The mission of the Aviation Technology Program at the College of Southern Nevada is to prepare students to successfully perform and pass the Practical Test Standards set forth by the Federal Aviation Administration as Commercial Pilots with an Instrument Rating. The Aviation Technology Program will continue to be a leader in providing educational excellence in a respectful and professionally nurturing environment.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated. This program curriculum standards are developed from Federal Aviation Administration (FAA) licensure criteria.

III. Major Findings and Conclusions of the Program Review

The Aviation Technology program is viable to our community for several reasons. Firstly, there is not another accredited educational institution in the state of Nevada that offers a parallel or even similar program. Our external community partners extend their validation of program support in writing; please review the attached letters of support. Considering the upcoming budget cuts, the consideration of discontinuation of this program would result in an educational disservice to our community and institutional regression at CSN. Employment opportunities abound within the Clark County Department of Aviation alone. More than 18,000 people are employed at McCarran International Airport, including more than 1,400 with the Clark County Department of Aviation and McCarran airport has an annual economic impact of more than \$27.8 billion in Clark County, Nevada. These figures do not include the multitude of individual airlines that serve the community, the employment numbers, nor the financial impact in our area identifying the airline resources and contributions. Approval of the additional aviation program (Aviation Technology – Flight Operations) would further enhance the opportunities of those in the community and meet the needs of our local airport and airline industry.

Program completion rates are low since FAA licensure does not require degree completion.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

2009-10

130

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>4</u> |
| 2008-09 | <u>1</u> |
| 2009-10 | <u>1</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>109</u> |
|-----------|------------|

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| <p style="text-align: center;">PROGRAM REVIEW <i>College of Southern Nevada</i> <i>Building Technology, A.A.S.</i></p> |
|---|

I. Description of Program Reviewed

The mission of the Building Inspection Program is to provide students with the educational experience of the diversified industry of Building Inspections and related professions; to prepare students for the various certification exams necessary to attain a career in the Building Inspection industry; to stay current with nation wide code references and to maintain in close contact with the community and the Building Inspection industry of Southern Nevada and be responsive to their needs.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated. This program's curriculum standards are developed from National Center for Construction Education and Research (NCCER) and state licensure criteria.

III. Major Findings and Conclusions of the Program Review

These program emphases face significant challenges due to the current economic climate and Nevada's budget crisis. The building construction industry has been hit particularly hard in the Las Vegas Valley in the past two years. As a result, enrollment has declined in CSN's Building Technology programs.

Positive changes coming in Nevada will increase the relevance and value of CSN's offerings. In 2010, the state will require a Bachelor's degree for surveyors. By 2011, all homes being constructed in Nevada will require implementation of Green Technology. The Program is currently looking into revamping BT programs to institute greater emphasis on Green Technology and sustainable construction. CSN previously had a 3+1 degree program agreement with Nevada State College (which they terminated), but we are actively pursuing new agreements with several other four-year institutions to provide our students with a clear path to a relevant baccalaureate program

The Building Inspection Program has the lowest enrollment that it has had in the past ten years which is because of the low rate of employment in the construction industry. The local industry Building Departments are not hiring. The construction industry will turn around eventually and there will be a need for new building inspectors once more. We are offering fewer courses per semester, until there is an increase in demand for more building inspectors.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|------------|
| 2009-10 | <u>296</u> |
|---------|------------|

B. Number of graduates from the program for the following years:

| | |
|---------|-----------|
| 2007-08 | <u>11</u> |
| 2008-09 | <u>22</u> |
| 2009-10 | <u>18</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>625</u> |
|-----------|------------|

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW <i>College of Southern Nevada</i> <i>Building Technology, Certificate of Achievement</i></p> |
|---|

I. Description of Program reviewed

The mission of the Land Surveying program is to provide students with theoretical knowledge and practical experience as a surveyor.

The program supports the CSN and the Advanced and Applied Technology missions. The program emphasizes the development of technical and occupational skills necessary to enter the construction and land management workforce and to maintain close contact with the community and the construction industry of Southern Nevada and to be responsive to their needs.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated. This program's curriculum standards are developed from National Center for Construction Education and Research (NCCER) and state licensure criteria.

III. Major Findings and Conclusions of the Program Review

These program emphases face significant challenges due to the current economic climate and Nevada's budget crisis. The building construction industry has been hit particularly hard in the Las Vegas Valley in the past two years. As a result, enrollment has declined in CSN's Building Technology programs.

Positive changes coming in Nevada will increase the relevance and value of CSN's offerings. In 2010, the state will require a Bachelor's degree for surveyors. By 2011, all homes being constructed in Nevada will require implementation of Green Technology. The Program is currently looking into revamping BT programs to institute greater emphasis on Green Technology and sustainable construction. CSN previously had a 3+1 degree program agreement with Nevada State College (which they terminated), but we are actively pursuing new agreements with several other four-year institutions to provide our students with a clear path to a relevant baccalaureate program.

This program is under continued re-engineering to better align with GIS and Geomatics requirements. New requirements from the state after 2010 mandate completion of an approved Bachelor's degree.

The Building Inspection Program has the lowest enrollment that it has had in the past ten years which is because of the low rate of employment in the construction industry. The local industry Building Departments are not hiring. The construction industry will turn around eventually and there will be a need for new building inspectors once more. We are offering fewer courses per semester, until there is an increase in demand for more building inspectors.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>47</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>1</u> |
| 2008-09 | <u>6</u> |
| 2009-10 | <u>9</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>625</u> |
|-----------|------------|

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW <i>College of Southern Nevada</i> <i>CADD Technology, A.A.S.</i></p> |
|---|

I. Description of Program Reviewed

The Program Mission of the CADD Technology Program is to provide the student with the opportunity to develop technical and occupational skills needed for employment or advancement through individual courses, and certificate or a degree programs that provide cutting-edge job skills.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated. The future of the CADD Program is promising to students that need CADD skill for their career. We are working with other departments that utilize CADD technology to give them the support they need so that their students can articulate into the career path of their choice. We have had to offer fewer sections in some courses, but we are maintaining the proper amount of classes to our students to graduate.

III. Major Findings and Conclusions of the Program Review

The CADD Technology Program and the Building Technology Program are working together to develop a Civil Engineering Technician Program. This program will have a strong emphasis in CADD and Survey Technology. This program will be design to provide the demand for Civil Engineering firms with qualified CADD technicians. Due to certain budget restraints, new programs have been put on hold.

The CADD Technology Program will also be looking into the feasibility of a Mechanical Engineering Technician Program. Clark County has seen a rise in fabrication industries moving into the valley. The demand for Rapid Prototyping in western United States colleges has seen an increase for qualified tooling machinist. The CADD Technology Program will seek information from the Advisory Committee to pursue this program.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>94</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|-----------|
| 2007-08 | <u>7</u> |
| 2008-09 | <u>13</u> |
| 2009-10 | <u>5</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>115</u> |
|-----------|------------|

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW <i>College of Southern Nevada</i> <i>CADD Technology, Certificate of Achievement</i></p> |
|---|

I. Description of Program Reviewed

The Program Mission of the CADD Technology Program is to provide the student with the opportunity to develop technical and occupational skills needed for employment or advancement through individual courses, and certificate or a degree programs that provide cutting-edge job skills.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated. The future of the CADD Program is promising to students that need CADD skill for their career. We are working with other departments that utilize CADD technology to give them the support they need so that their students can articulate into the career path of their choice. We have had to offer fewer sections in some courses, but we are maintaining the proper amount of classes to our students to graduate.

III. Major Findings and Conclusions of the Program Review

The CADD Technology Program and the Building Technology Program are working together to develop a Civil Engineering Technician Program. This program will have a strong emphasis in CADD and Survey Technology. This program will be design to provide the demand for Civil Engineering firms with qualified CADD technicians. Due to certain budget restraints, new programs have been put on hold.

The CADD Technology Program will also be looking into the feasibility of a Mechanical Engineering Technician Program. Clark County has seen a rise in fabrication industries moving into the valley. The demand for Rapid Prototyping in western United States colleges has seen an increase for qualified tooling machinist. The CADD Technology Program will seek information from the Advisory Committee to pursue this program.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

2009-10

11

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>7</u> |
| 2008-09 | <u>1</u> |
| 2009-10 | <u>3</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>115</u> |
|-----------|------------|

| |
|--|
| <p style="text-align: center;">PROGRAM REVIEW College of Southern Nevada <i>Computing and Information Technology, A.A.S.</i></p> |
|--|

I. Description of Program Reviewed

The A.A.S. in Computing and Information Technology produces graduates who have fundamental knowledge of computer hardware, software, and networking. This program supports the CSN mission of preparing students for university transfer, applied science, industry certification and employment in the government, business and educational sectors.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated.

III. Major Findings and Conclusions of the Program Review

The computer and information technology field is in a constant state of change. The life-cycle of most computer systems rarely exceed 2-3 years. Our degree and courses are reviewed frequently and changes are made when deemed appropriate. Faculty are continually engaged in improving their knowledge base to meet these changes. As a result, we are regularly faced with significant challenges to our ability to provide our students with a quality education that will prepare them for the hurdles they must face in obtaining a rewarding career that will also meet their financial needs.

During the 2009-2010 academic year we made significant changes to the degree. A specific core (15 credits) was specified and six specialized concentration areas were developed.

Student retention has always been a problem area. A significant number of our students take specific courses to for job advancement or career change, some already possess a Bachelor's or graduate degree.

In the final analysis, I believe we have a strong program that is successfully meeting the needs of our community. We have focused on providing educational opportunities that are tailored to meet the unique needs of our students.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|------------|
| 2009-10 | <u>538</u> |
|---------|------------|

B. Number of graduates from the program for the following years:

| | |
|---------|-----------|
| 2007-08 | <u>20</u> |
| 2008-09 | <u>32</u> |
| 2009-10 | <u>33</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|-------------|
| Fall 2009 | <u>3387</u> |
|-----------|-------------|

PROGRAM REVIEW

College of Southern Nevada

Computing and Information Technology, Certificate of Achievement

I. Description of Program Reviewed

The Networking Emphasis Certificate produces graduates who have sufficient knowledge of the NOS (Network Operating System) to design, install, configure, and maintain a computer network. This supports the mission of CSN by providing a critical need of the community, to be able to hire a competent network administrator. Our graduates will be able to support their network infrastructure.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated.

III. Major Findings and Conclusions of the Program Review

The computer and information technology field is in a constant state of change. A significant number of our students take specific courses to for job advancement or career change, some already possess a Bachelor's or graduate degree. In order to better meet student needs all of the Computing and Information Technology Certificates of Achievement were deactivated this year. We have replaced them with Certificates of Completion.

In the final analysis, I believe we have a strong program that is successfully meeting the needs of our community. We have focused on providing educational opportunities that are tailored to meet the unique needs of our students.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|------------|
| 2009-10 | <u>135</u> |
|---------|------------|

B. Number of graduates from the program for the following years:

| | |
|---------|-----------|
| 2007-08 | <u>15</u> |
| 2008-09 | <u>7</u> |
| 2009-10 | <u>5</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|-------------|
| Fall 2009 | <u>1208</u> |
|-----------|-------------|

| |
|--|
| <p style="text-align: center;">PROGRAM REVIEW College of Southern Nevada <i>Diesel Heavy Equipment Master Technician, A.A.S.</i></p> |
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I. Description of Program Reviewed

The mission of the College of Southern Nevada's Department of Diesel Technology is to prepare students to successfully enter the workforce as competent, ethical, entry level diesel technicians, with demonstrated skill ability in the diesel field.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated. Criteria are developed under NATEF standards.

III. Major Findings and Conclusions of the Program Review

The principal area of concern is a general lack of degree completers as a ratio to program majors. Paradoxically, this is a pattern which can be viewed as students' successful attainment of the skills and knowledge required to become gainfully employed in the diesel technology field.

Each of these processes can be independently learned, and with that knowledge base, employment opportunities can be readily available at a significant wage. Thus, while lacking a high number of program graduates, each student completing a course in any of the diesel processes can be realistically prepared for employment.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>24</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>0</u> |
| 2008-09 | <u>0</u> |
| 2009-10 | <u>0</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|-----------|
| Fall 2009 | <u>96</u> |
|-----------|-----------|

PROGRAM REVIEW

College of Southern Nevada

Diesel Heavy Equipment Maintenance Technician, Certificate of Achievement

I. Description of Program Reviewed

The mission of the College of Southern Nevada's Department of Diesel Technology is to prepare students to successfully enter the workforce as competent, ethical, entry level diesel technicians with demonstrated skill ability in the diesel field.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated. Review criteria are based on NATEF standards.

III. Major Findings and Conclusions of the Program Review

The principal area of concern is a general lack of degree completers as a ratio to program majors. Paradoxically, this is a pattern which can be viewed as students' successful attainment of the skills and knowledge required to become gainfully employed in the diesel technology field.

Each of these processes can be independently learned, and with that knowledge base, employment opportunities can be readily available at a significant wage. Thus, while lacking a high number of program graduates, each student completing a course in any of the diesel processes can be realistically prepared for employment.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|----------|
| 2009-10 | <u>4</u> |
|---------|----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>0</u> |
| 2008-09 | <u>0</u> |
| 2009-10 | <u>0</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|-----------|
| Fall 2009 | <u>96</u> |
|-----------|-----------|

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW <i>College of Southern Nevada</i> <i>Electronic Engineering Technology, A.A.S.</i></p> |
|---|

I. Description of Program Reviewed

The Cisco Networking Academy Program is dedicated to providing our students with the academic knowledge and practical skills needed to successfully compete for high paying jobs in various areas of the computer networking industry. The program provides students with proof of training by awarding AAS degrees (Electronic Engineering Technology – Networking & Internetworking Emphasis and Electronic Engineering Technology – Security Emphasis). It also provides courses designed to prepare students to pass industry certifications including two four course sub-programs that will lead to certification as a Cisco Certified Network Associate (CCNA), a junior network administrator certification, and a Cisco Certified Network Professional (CCNP), a senior network administrator certification.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean and members of the advisory committee participated. This program is accredited by Cisco Learning Institute and curriculum standards are developed from the Cisco Networking Academy.

III. Major Findings and Conclusions of the Program Review

The computer networking field is in a constant state of change. The life-cycle of most computer systems rarely exceeds 2-3 years. Our courses and associated training equipment need regular upgrading to meet this constant change in technology. Faculty are continually engaged in improving their knowledge base to meet these changes. As a result, we are regularly faced with significant challenges to our ability to provide our students with a quality education that will prepare them for the hurdles they must face in obtaining a rewarding career that will also meet their financial needs.

Two of our sub-programs Cisco Certified Network Associate (CCNA) and Cisco Certified Network Professional (CCNP) have undergone major revisions in the past four years. This was necessitated by changes to the knowledge base required by successful candidates for the associated industry certifications. Revisions of the curriculum were provided by the Cisco Learning Institute. This non-profit education arm of Cisco Systems, Inc. provides members of its academy program with extensive course material to support the learning needs of enrolled students. This material includes computer based training modules, power point presentations and complex labs to facilitate hands-on training. In addition, faculty are sent to training, conducted by Cisco, in order ensure they are properly trained in all aspects of curriculum delivery.

Student retention has always been a problem area. Many students join the program ill-equipped to handle the rigors of an engineering technology based curriculum. Strong math, critical thinking and problem solving skills are needed to successfully complete either the AAS degrees or the individual industry certification sub-programs.

An evaluation of program effectiveness based solely on graduation rates would be very misleading. The majority of our students come to enhance their education for job advancement or attainment. They may take only a few courses targeted to their current/future employment or to obtain an industry certification.

In the final analysis, I believe we have a strong program that is successfully meeting the needs of our community. We have focused on providing educational opportunities that are tailored to meet the unique needs of our students even if in most cases that doesn't result in a degree at the completion of their course of study.

Recruitment is a critical challenge for the program, and a number of initiatives have been undertaken to increase the number of students.

- First, in response to a large local company we started a number of new and updated courses for their employees. They directly send us 50 or more students (head count) a semester. We added a concentration to the degree (effective date - Fall 2011) that includes those additional courses. They want all their current technicians to complete our degree. In addition they have advertised guaranteed job interviews based upon completion of specific degree courses and by best guess increased our head counts in program classes by almost another 50.
- Second, similar situations with other large local employers will be attempted.
- Third, in response to industry requests and reviews of future employment expectations in state data a new concentration in Medical equipment repair was added to the degree.

Recruitment of students remains a challenge. The program plans to contact the major telecommunication companies in the area and ask for their input on improving the program. The meetings will:

- Inform key personnel in the businesses of the program and the school's willingness to listen to them.
- Obtain valuable industry input on changes to the curriculum.
- Make them aware of the school's flexibility in providing education and training for their employees. Note: Such meetings with companies in other industries have provided increased head counts in the general electronics emphasis courses.

Recruitment of students remains a challenge, since students directly out of high school that obtain either the AAS or CA cannot get a job in the industry until they are 21. However, we have added a concentration that focuses on Kiosks, ATMs and other direct customer support devices and will be able to recruit those students. These devices are evolving in a manner similar to slot machines and they share many of the same types of subassemblies such as currency acceptors, card readers, user input panels, communication interfaces, and user displays. Thus technicians in these industries should have the same basic education requirements as slot technicians. There are only a few courses different between the concentrations.

Graduation/Completion Data: Graduations are an easy number to report since the school keeps that data, however completion data is much more difficult to measure since it is determined by the objectives of each student. Furthermore, student goals much less student completion data isn't collected and can only be discussed based upon anecdotal information. For many students their objective was to complete enough of the program to get a job in the industry. Depending upon the local gaming economy and potential employer their objective could have been met by completing just the first course, Introduction to Slot Technology. In other cases employers wanted their perspective hires to have successfully completed a few more than the first course. A good case could be made that the graduates of the program mostly represent those that wanted more than the minimum education required to obtain a job.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|------------|
| 2009-10 | <u>327</u> |
|---------|------------|

B. Number of graduates from the program for the following years:

| | |
|---------|-----------|
| 2007-08 | <u>7</u> |
| 2008-09 | <u>19</u> |
| 2009-10 | <u>10</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|-------------|
| Fall 2009 | <u>1433</u> |
|-----------|-------------|

PROGRAM REVIEW

College of Southern Nevada

Electronic Engineering Technology, Certificate of Achievement

I. Description of Program Reviewed

Upon successful completion of this certificate program, students will be prepared for an entry-level position providing support in industry. Instruction includes both analog and digital design and testing of electronic circuits, devices and systems, telecommunications and data communications.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, and dean participated.

III. Major Findings and Conclusions of the Program Review

The computer networking field is in a constant state of change. The life-cycle of most computer systems rarely exceeds 2-3 years. Our courses and associated training equipment need regular upgrading to meet this constant change in technology. Faculty are continually engaged in improving their knowledge base to meet these changes. As a result, we are regularly faced with significant challenges to our ability to provide our students with a quality education that will prepare them for the hurdles they must face in obtaining a rewarding career that will also meet their financial needs.

Two of our sub-programs Cisco Certified Network Associate (CCNA) and Cisco Certified Network Professional (CCNP) have undergone major revisions in the past four years. This was necessitated by changes to the knowledge base required by successful candidates for the associated industry certifications. Revisions of the curriculum were provided by the Cisco Learning Institute. This non-profit education arm of Cisco Systems, Inc. provides members of its academy program with extensive course material to support the learning needs of enrolled students. This material includes computer based training modules, power point presentations and complex labs to facilitate hands-on training. In addition, faculty are sent to training, conducted by Cisco, in order ensure they are properly trained in all aspects of curriculum delivery.

Student retention has always been a problem area. Many students join the program ill-equipped to handle the rigors of an engineering technology based curriculum. Strong math, critical thinking and problem solving skills are needed to successfully complete either the A.A.S. degrees or the individual industry certification sub-programs.

An evaluation of program effectiveness based solely on graduation rates would be very misleading. The majority of our students come to enhance their education for job advancement or attainment. They may take only a few courses targeted to their current/future employment or to obtain an industry certification.

In the final analysis, I believe we have a strong program that is successfully meeting the needs of our community. We have focused on providing educational opportunities that are tailored to meet the unique needs of our students even if in most cases that doesn't result in a degree at the completion of their course of study.

Recruitment is a critical challenge for the program, and a number of incentives have been undertaken to increase the number of students.

- First, in response to a large local company we started a number of new and updated courses for their employees. They directly send us 50 or more students (head count) a semester. We added a concentration to the degree (effective date - Fall 2011) that includes those additional courses. They want all their current technicians to complete our degree. In addition, they have advertised guaranteed job interviews based upon completion of specific degree courses and by best guess increased our head counts in program classes by almost another 50.
- Second, similar situations with other large local employers will be attempted.
- Third, in response to industry requests and reviews of future employment expectations in state data a new concentration in Medical equipment repair was added to the degree.

Recruitment of students remains a challenge. The program plans to contact the major telecommunication companies in the area and ask for their input on improving the program. The meetings will:

- Inform key personnel in the businesses of the program and the school's willingness to listen to them.
- Obtain valuable industry input on changes to the curriculum.
- Make them aware of the schools flexibility in providing education and training for their employees. Note: Such meetings with companies in other industries have provided increased head counts in the general electronics emphasis courses.

Recruitment of students remains a challenge, since students directly out of high school that obtain either the A.A.S. or C.A. cannot get a job in the industry until they are 21. However, we have added a concentration that focuses on Kiosks, ATMs and other direct customer support devices and will be able to recruit those students. These devices are evolving in a manner similar to slot machines and they share many of the same types of subassemblies such as currency acceptors, card readers, user input panels, communication interfaces, and user displays. Thus technicians in these industries should have the same basic education requirements as slot technicians. There are only a few courses different between the concentrations.

Graduation/Completion Data: Graduations are an easy number to report since the school keeps that data, however completion data is much more difficult to measure since it is determined by the objectives of each student. Furthermore, student goals much less student completion data isn't collected and can only be discussed based upon anecdotal information. For many students their objective was to complete enough of the program to get a job in the industry. Depending upon the local gaming economy and potential employer their objective could have been met by completing just the first course, Introduction to Slot Technology. In other cases employers wanted their perspective hires to have successfully completed a few more than the first course. A good case could be made that the graduates of the program mostly represent those that wanted more than the minimum education required to obtain a job.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>49</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>1</u> |
| 2008-09 | <u>1</u> |
| 2009-10 | <u>1</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|-------------|
| Fall 2009 | <u>1065</u> |
|-----------|-------------|

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW <i>College of Southern Nevada</i> <i>Environmental Safety and Health, A.A.S.</i></p> |
|---|

I. Description of Program Reviewed

This degree provides students with the opportunity to acquire the knowledge, skills and abilities to obtain employment in the environmental resource field. Courses include a 40-hour HAZWOPER OSHA requirement. Academic skills emphasizing related math, science and human relations components are stressed to prepare students to meet challenges common in the workplace

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated.

III. Major Findings and Conclusions of the Program Review

The Environmental Safety and Health Program (ESH), while small, has shown slow but steady enrollment increases in recent years. The program has collaborated effectively with Workforce Development to offer special HAZWOPER and OSHA courses. The program was one of the first in Applied Technology to offer online distance education courses. The nature of coursework is such that it allows for excellent online delivery in the classes without a lab component. The Program Director has done an excellent job at adapting these courses.

Like all programs at the College, ESH faces challenges posed both by Nevada's budget crisis, and by the current economic climate throughout the nation. Our program, which offers degrees in Environmental Resource Technology, Occupational Safety Management, Water Treatment, and Wastewater Treatment, has no equivalent in our region. We are confident that the program can increase enrollment and maintain or increase the quality of coursework that our community is accustomed to from the College of Southern Nevada.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>84</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>5</u> |
| 2008-09 | <u>6</u> |
| 2009-10 | <u>8</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>149</u> |
|-----------|------------|

PROGRAM REVIEW

College of Southern Nevada

Environmental Safety and Health, Certificate of Achievement

I. Description of Program Reviewed

This degree provides students with the opportunity to acquire the knowledge, skills and abilities to obtain employment in the environmental resource field. Courses include a 40-hour HAZWOPER OSHA requirement. Academic skills emphasizing related math, science and human relations components are stressed to prepare students to meet challenges common in the workplace.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated.

III. Major Findings and Conclusions of the Program Review

The Environmental Safety and Health Program (ESH), while small, has shown slow but steady enrollment increases in recent years. The program has collaborated effectively with Workforce Development to offer special HAZWOPER and OSHA courses. The program was one of the first in Applied Technology to offer online distance education courses. The nature of coursework is such that it allows for excellent online delivery in the classes without a lab component. The Program Director has done an excellent job at adapting these courses.

Like all programs at the College, ESH faces challenges posed both by Nevada's budget crisis, and by the current economic climate throughout the nation. Our program, which offers degrees in Environmental Resource Technology, Occupational Safety Management, Water Treatment, and Wastewater Treatment, has no equivalent in our region. We are confident that the program can increase enrollment and maintain or increase the quality of coursework that our community is accustomed to from the College of Southern Nevada.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>33</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>3</u> |
| 2008-09 | <u>1</u> |
| 2009-10 | <u>5</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>149</u> |
|-----------|------------|

| |
|--|
| <p style="text-align: center;">PROGRAM REVIEW <i>College of Southern Nevada</i> <i>Graphic Technology, A.A.S.</i></p> |
|--|

I. Description of Program Reviewed

The Animation Program is an industry designed computer graphic degree that offers hands on training in the field of 3D Computer Animation. Its mission is to provide industry standard training in the area of Motion Pictures, Television, AEC (architecture, engineering & construction), Forensics, Reconstruction for Courtroom Submissions and Gaming. Students choosing this career path can either go directly into the workforce, or further their education in any one of the specialized areas. This program supports the mission of CSN by providing students with the necessary skills to enter into the work place in a highly demanded career field. This is supported by the use of today's cutting edge industry used computer equipment and software.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated. Criteria were developed by incorporating current industry standards.

III. Major Findings and Conclusions of the Program Review

- There have been no changes to this animation program, just improvements in the equipment and the courses related to the equipment and software.
- Resource challenges have been and still are, in the area of financial support for proper facility accommodations and advertisement of the program to the community.
- Barriers to recruitment and/or retention, has always been the lack of exposure of the program to the community. Outside the walls of the building that the animation program is housed in, knowledge of the program is spread via word-of-mouth by the students that enroll into the program and flyer/brochures at occasional open house activities.
- There has been a reduction in the number of sections offered in the beginning and intermediate course offerings, due to budget constraints.
- Graduation/Completion Data varies in the Animation Program due to the fact that the industry has yet to fully require job seekers to possess a degree in animation for job placement. Most industry employers only require that a portfolio consist of a good animation reel of their work and a storyboard that follows it. So some students entering in the animation program at CSN will take all of their occupational area courses (animation) and apply for the Certificate of Achievement.

Besides having students return to take classes over again, many of our students report that they have secured employment in the graphic design industry or have gone on to higher-level education. Using their Associates of Applied Science degree, students find they are well

prepared to either begin earning a living in graphic design or continue their education. The Graphic Communication program at CSN is known nationally as a high quality educational opportunity. When faculty positions need to be filled, applicants from around the nation apply. Approximately 25% of the student body of the program is working graphic designers who have no need for a degree or certificate. Rather, they are seeking training in new methods and tools. Success for these students is measured in their understanding and mastery of the new techniques they need for their profession. Students not yet in the profession are exploring their options and weighing whether or not to become commercial photographers. These students may also parlay their AAS degree into a Bachelor's or Master's degree.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|------------|
| 2009-10 | <u>430</u> |
|---------|------------|

B. Number of graduates from the program for the following years:

| | |
|---------|-----------|
| 2007-08 | <u>22</u> |
| 2008-09 | <u>20</u> |
| 2009-10 | <u>12</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>827</u> |
|-----------|------------|

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|--|
| <p style="text-align: center;">PROGRAM REVIEW College of Southern Nevada <i>Graphic Technology, Certificate of Achievement</i></p> |
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I. Description of Program Reviewed

The Graphic Communications Program's mission is to train students in the latest graphic techniques and equipment currently used in the graphics workplace. With a strong emphasis in digital imaging, students are prepared for entry into the workplace equipped with the skills and techniques needed for success. Established graphic artists keep their skills current with CSN's class offerings.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated. Criteria were developed by incorporating current industry standards.

III. Major Findings and Conclusions of the Program Review

- There have been no changes to this animation program, just improvements in the equipment and the courses related to the equipment and software.
- Resource challenges have been and still are, in the area of financial support for proper facility accommodations and advertisement of the program to the community.
- Barriers to recruitment and/or retention, has always been the lack of exposure of the program to the community. Outside the walls of the building that the animation program is housed in, knowledge of the program is spread via word-of-mouth by the students that enroll into the program and flyer/brochures at occasional open house activities.
- There has been a reduction in the number of sections offered in the beginning and intermediate course offerings, due to budget constraints.
- Graduation/Completion Data varies in the Animation Program due to the fact that the industry has yet to fully require job seekers to possess a degree in animation for job placement. Most industry employers only require that a portfolio consist of a good animation reel of their work and a storyboard that follows it. So some students entering in the animation program at CSN will take all of their occupational area courses (animation) and apply for the Certificate of Achievement.

Besides having students return to take classes over again, many of our students report that they have secured employment in the graphic design industry or have gone on to higher-level education. Using their Associates of Applied Science degree, students find they are well prepared to either begin earning a living in graphic design or continue their education. The Graphic Communication program at CSN is known nationally as a high quality educational opportunity. When faculty positions need to be filled, applicants from around the nation apply. Approximately 25% of the student body of the program is working graphic designers who have

no need for a degree or certificate. Rather, they are seeking training in new methods and tools. Success for these students is measured in their understanding and mastery of the new techniques they need for their profession. Students not yet in the profession are exploring their options and weighing whether or not to become commercial photographers. These students may also parlay their A.A.S. degree into a Bachelor's or Master's degree.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>77</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|-----------|
| 2007-08 | <u>5</u> |
| 2008-09 | <u>5</u> |
| 2009-10 | <u>14</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>827</u> |
|-----------|------------|

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW <i>College of Southern Nevada</i> <i>Mechanical Technology, A.A.S.</i></p> |
|---|

I. Description of Program Reviewed

The Mechanical Technology Program provides program necessary for the development of technical and occupational skills needed for immediate and meaningful employment in manufacturing, electro-mechanical maintenance, production controls, and automation systems. Individual courses, semester or one-year certificate programs as well as two-year associate's degrees are available for maintenance of a job's state-of-the-art skills.

The Associate of Applied Science in Mechanical Technology, Industrial Emphasis provides students with classroom and laboratory experiences in electricity, mechanical power, pneumatics, hydraulics and ferrous and non-ferrous material. The Industrial emphasis focuses on those skills used in industrial settings. Courses include Industrial Electricity, Mechanical Power Transmission and Programmable Logic Controllers.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated.

III. Major Findings and Conclusions of the Program Review

Recruitment of students remains a challenge. The program plans are to contact the local employers of the program's graduates and their competitors, to ask for their input on improving the program. The meetings will:

- Inform key personnel in the local businesses that aren't hiring graduates of the program and the school's willingness to listen to them.
- Obtain valuable industry input on changes to the curriculum.
- Make them aware of the school's flexibility in providing education and training for their employees.

The Operations program is an emphasis area under Mechanical Technology AAS degree and under the Mechanical Technology CA. Operations addresses industry electro-mechanical technologies in manufacturing and other production functions.

The Power Emphasis is under the Mechanical Technology AAS degree and under the Mechanical Technology CA. Power generation utilities are the program's employer constituencies.

Students in this discipline tend to take technical coursework that contributes to job performance or growth but they do not always complete all courses required for graduation.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>44</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>4</u> |
| 2008-09 | <u>2</u> |
| 2009-10 | <u>3</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|-----------|
| Fall 2009 | <u>65</u> |
|-----------|-----------|

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW <i>College of Southern Nevada</i> <i>Mechanical Technology, Certificate of Achievement</i></p> |
|---|

I. Description of Program Reviewed

The Mechanical Technology Program provides program necessary for the development of technical and occupational skills needed for immediate and meaningful employment in manufacturing, electro-mechanical maintenance, production controls, and automation systems. Individual courses, semester or one-year certificate programs as well as two-year associate's degrees are available for maintenance of a job's state-of-the-art skills.

The Certificate of Achievement in Mechanical Technology, Industrial Emphasis is an 18-month program that provides students with classroom and laboratory experiences in electricity, mechanical power, pneumatics, hydraulics and ferrous and non-ferrous material. The Industrial emphasis focuses on those skills used in industrial settings. Courses include Industrial Electricity, Mechanical Power Transmission and Programmable Logic Controllers.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated.

III. Major Findings and Conclusions of the Program Review

Recruitment of students remains a challenge. The program plans are to contact the local employers of the program's graduates and their competitors, to ask for their input on improving the program. The meetings will:

- Inform key personnel in the local businesses that aren't hiring graduates of the program and the school's willingness to listen to them.
- Obtain valuable industry input on changes to the curriculum.
- Make them aware of the school's flexibility in providing education and training for their employees.

The Operations program is an emphasis area under Mechanical Technology A.A.S. degree and under the Mechanical Technology C.A. Operations addresses industry electro-mechanical technologies in manufacturing and other production functions.

The Power Emphasis is under the Mechanical Technology A.A.S. degree and under the Mechanical Technology C.A. Power generation utilities are the program's employer constituencies.

Students in this discipline tend to take technical coursework that contributes to job performance or growth but they do not always complete all courses required for graduation.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>41</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>0</u> |
| 2008-09 | <u>1</u> |
| 2009-10 | <u>3</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|-----------|
| Fall 2009 | <u>65</u> |
|-----------|-----------|

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW <i>College of Southern Nevada</i> <i>Ornamental Horticulture, A.A.S.</i></p> |
|---|

I. Description of Program Reviewed

This degree is designed for students seeking transfer for a B.S in Horticulture. It combines the expertise and resources of the Associate Degree program at CSN with the plant and horticulture courses and faculty at the universities. Individuals with a B.S degree in Horticulture are in high demand for production, supervisory and management positions.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated. Accreditation is provided by the Professional Landcare Network (PLANET).

III. Major Findings and Conclusions of the Program Review

The program sponsors a national organization for students, Student American Institute of Floral Designers (SAIFD), which has anywhere from 5-19 students each year. These students participate in fundraisers to supplement the cost of attending the annual Symposium of AIFD each July. They compete against other school chapters and learn from the workshops/presentations during the event.

We have an established Internship requirement for the Certificate/Degree of three credits (225 hours). The students are placed into local shops, resort floral departments, silk companies, wedding chapels, wholesalers, and other establishments to get first- hand experience in the field. We have established great partnerships with these local floral employers. We have hosted job fairs for MGM Grand Floral and expect to do the same for the Venetian/Palazzo.

Students in this discipline tend to take technical coursework that contributes to job attainment or personal goals but they infrequently complete all courses required for graduation.

Become fully accredited by PLANET. Meeting the accreditation standards will require some modifications to curriculum that answer industry demands. It will provide students the opportunity to network with potential employers and students and faculty from other colleges and universities while competing in the annual Student Career Day. Participation in Student Career Day is required for accreditation.

Complete an articulation agreement with the Landscape Architecture Program at UNLV to provide a seamless transition path for our graduates into that program. The Program Coordinator at UNLV is including in her program changes utilizing CSN courses rather than scheduling and teaching the same course at UNLV. An articulation agreement will further strengthen this coordination and allow CSN graduates a seamless transition to UNLV if they choose to further their education.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>53</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>4</u> |
| 2008-09 | <u>6</u> |
| 2009-10 | <u>6</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>215</u> |
|-----------|------------|

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW College of Southern Nevada <i>Ornamental Horticulture, Certificate of Achievement</i></p> |
|---|

I. Description of Program Reviewed

The Ornamental Horticulture program offers four curriculum concentrations for the A.A.S. degree and three curriculum concentrations for the Certificate of Achievement. The mission/goal for each concentration is listed below. All comply with the mission of the Applied Technology Program to provide “for the development of technical and occupational skills needed for immediate and meaningful employment.”

Landscape Design Emphasis

The mission of the Landscape Design/Contracting emphasis of the Ornamental Horticulture A.A.S. Degree at the Community College of Southern Nevada is to provide students with entry level skills and knowledge necessary to gain employment and be successful within the fields of landscape design and landscape contracting. Completion of the program will also provide a strong foundation for students pursuing advanced degrees in Horticulture.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated. The curriculum has been reviewed by the Accreditation Committee of the Professional Landcare Network and the Curriculum Advisory Subcommittee of the Joint Technical Skills Committee.

III. Major Findings and Conclusions of the Program Review

The program sponsors a national organization for students, Student American Institute of Floral Designers (SAIFD), which has anywhere from 5-19 students each year. These students participate in fundraisers to supplement the cost of attending the annual Symposium of AIFD each July. They compete against other school chapters and learn from the workshops/presentations during the event.

We have an established Internship requirement for the Certificate/Degree of three credits (225 hours). The students are placed into local shops, resort floral departments, silk companies, wedding chapels, wholesalers, and other establishments to get first-hand experience in the field. We have established great partnerships with these local floral employers. We have hosted job fairs for MGM Grand Floral and expect to do the same for the Venetian/Palazzo.

Students in this discipline tend to take technical coursework that contributes to job attainment or personal goals but they infrequently complete all courses required for graduation.

Become fully accredited by PLANET. Meeting the accreditation standards will require some modifications to curriculum that answer industry demands. It will provide students the opportunity to network with potential employers and students and faculty from other colleges and universities while competing in the annual Student Career Day. Participation in Student Career Day is required for accreditation.

Complete an articulation agreement with the Landscape Architecture Program at UNLV to provide a seamless transition path for our graduates into that program. The Program Coordinator at UNLV is including in her program changes utilizing CSN courses rather than scheduling and teaching the same course at UNLV. An articulation agreement will further strengthen this coordination and allow CSN graduates a seamless transition to UNLV if they choose to further their education.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>17</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>2</u> |
| 2008-09 | <u>3</u> |
| 2009-10 | <u>0</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>215</u> |
|-----------|------------|

PROGRAM REVIEW
College of Southern Nevada
Ornamental Horticulture/Environmental Horticulture, A.S.

I. Description of Program Reviewed

This degree is designed for students seeking transfer for a B.S. in Horticulture. It combines the expertise and resources of the Associate Degree program at CSN with the plant and horticulture courses and faculty at the universities. Individuals with a B.S. degree in Horticulture are in high demand for production, supervisory and management positions.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated. Accreditation is provided by the Professional Landcare Network (PLANET).

III. Major Findings and Conclusions of the Program Review

Become fully accredited by PLANET. Meeting the accreditation standards will require some modifications to curriculum that answer industry demands. It will provide students the opportunity to network with potential employers and students and faculty from other colleges and universities while competing in the annual Student Career Day. Participation in Student Career Day is required for accreditation.

Complete an articulation agreement with the Landscape Architecture Program at UNLV to provide a seamless transition path for our graduates into that program. The Program Coordinator at UNLV is including in her program changes utilizing CSN courses rather than scheduling and teaching the same course at UNLV. An articulation agreement will further strengthen this coordination and allow CSN graduates a seamless transition to UNLV if they choose to further their education.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>16</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>0</u> |
| 2008-09 | <u>0</u> |
| 2009-10 | <u>0</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>215</u> |
|-----------|------------|

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW <i>College of Southern Nevada</i> <i>Photography, A.A.S.</i></p> |
|---|

I. Description of Program Reviewed

The Commercial Photography Program's mission is to train students in the latest photographic techniques and equipment currently used in the photographic workplace. With a strong emphasis in digital imaging, students are prepared for entry into the workplace equipped with the skills and techniques needed for success. Established photographers keep their skills current with CSN's class offerings.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated. Criteria were developed by incorporating current industry standards.

III. Major Findings and Conclusions of the Program Review

The student population served by the Commercial Photography program consists of recent high school graduates seeking to become professional photographers along with those currently working in the industry who find themselves in need of training in newer technologies. Historically, community colleges have provided the educational training their local communities required. By offering training in industry-current tools and technologies, the Commercial Photography program helps students master these new tools. All faculty members also work in the commercial photography industry, and know first-hand what clients need and what tools are required to satisfy those needs. By furthering their own education and training, faculty members keep current in the latest trends, techniques and tools. The curriculum of photography classes is constantly undergoing review and when necessary is changed to reflect the changes found within the commercial photography field. Besides having students return to take classes over again, many of our students report that they have secured employment in the photographic industry or have gone on to higher-level education. Using their Associates of Applied Science degree, students find they are well prepared to either begin earning a living in commercial photography or continue their education. The Commercial Photography program at CSN is known nationally as a high quality educational opportunity. When faculty positions need to be filled, applicants from around the nation apply.

In the videography program, students learn the latest in digital camera operation, lighting and the necessary editing skills required of today's videographers. The students leave the program with the skills of story concepts, scriptwriting, film direction, and high level editing among others. The videography faculty are film makers and scriptwriters in their own right. They bring their industry-current experiences with them into the classroom to help guide videography students in their choice of classes based on current industry needs.

One issue that needs additional study is the problem of students not continuing on to graduation. Very often videography students either take only those classes required for workplace advancement or find work within the field prior to graduation and do not return. CSN's videography program is recognized nationally as one producing videographers regardless of any academic degrees attained.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|------------|
| 2009-10 | <u>345</u> |
|---------|------------|

B. Number of graduates from the program for the following years:

| | |
|---------|-----------|
| 2007-08 | <u>13</u> |
| 2008-09 | <u>13</u> |
| 2009-10 | <u>21</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|-------------|
| Fall 2009 | <u>1051</u> |
|-----------|-------------|

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW <i>College of Southern Nevada</i> <i>Photography, Certificate of Achievement</i></p> |
|---|

I. Description of Program Reviewed

The Commercial Photography Program's mission is to train students in the latest photographic techniques and equipment currently used in the photographic workplace. With a strong emphasis in digital imaging, students are prepared for entry into the workplace equipped with the skills and techniques needed for success. Established photographers keep their skills current with CSN's class offerings.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated. Criteria were developed by incorporating current industry standards.

III. Major Findings and Conclusions of the Program Review

The student population served by the Commercial Photography program consists of recent high school graduates seeking to become professional photographers along with those currently working in the industry who find themselves in need of training in newer technologies. Historically, community colleges have provided the educational training their local communities required. By offering training in industry-current tools and technologies, the Commercial Photography program helps students master these new tools. All faculty members also work in the commercial photography industry, and know first-hand what clients need and what tools are required to satisfy those needs. By furthering their own education and training, faculty members keep current in the latest trends, techniques and tools. The curriculum of photography classes is constantly undergoing review and when necessary is changed to reflect the changes found within the commercial photography field. Besides having students return to take classes over again, many of our students report that they have secured employment in the photographic industry or have gone on to higher-level education. Using their Associates of Applied Science degree, students find they are well prepared to either begin earning a living in commercial photography or continue their education. The Commercial Photography program at CSN is known nationally as a high quality educational opportunity. When faculty positions need to be filled, applicants from around the nation apply.

In the videography program, students learn the latest in digital camera operation, lighting and the necessary editing skills required of today's videographers. The students leave the program with the skills of story concepts, scriptwriting, film direction, and high level editing among others. The videography faculty are film makers and scriptwriters in their own right. They bring their industry-current experiences with them into the classroom to help guide videography students in their choice of classes based on current industry needs.

One issue that needs additional study is the problem of students not continuing on to graduation. Very often videography students either take only those classes required for workplace advancement or find work within the field prior to graduation and do not return. CSN's videography program is recognized nationally as one producing videographers regardless of any academic degrees attained.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|------------|
| 2009-10 | <u>101</u> |
|---------|------------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>4</u> |
| 2008-09 | <u>3</u> |
| 2009-10 | <u>4</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|-------------|
| Fall 2009 | <u>1051</u> |
|-----------|-------------|

| |
|--|
| <p style="text-align: center;">PROGRAM REVIEW <i>College of Southern Nevada</i> <i>Welding Technology, A.A.S.</i></p> |
|--|

I. Description of Program Reviewed

The mission of the College of Southern Nevada's Department of Welding Technology is to provide the most current and relevant instruction in welding and welding related processes available thus insuring individuals develop the skills and knowledge necessary to become gainfully employed in the field of welding in order to adequately meet the demands of industry and business within the local community.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated. This program is accredited by the American Welding Society and curriculum standards are developed from AWS certification criteria.

III. Major Findings and Conclusions of the Program Review

The principal area of concern is a general lack of degree completers as a ratio to program majors. Paradoxically, this is a pattern which can be viewed as students' successful attainment of the skills and knowledge required to become gainfully employed in the welding field.

Welding encompasses four major processes, all of which are taught at the College of Southern Nevada. These include Shielded Metal Arc Welding (SMAW), also referred to as stick welding, Gas Metal Arc Welding (GMAW), also referred to as Mig, or simply wire – feed welding, Flux Cored Arc Welding (FCAW) and Gas Tungsten Arc Welding (GTAW), also referred to as Tig welding.

Each of these processes can be independently learned, and with that knowledge base, employment opportunities can be readily available at a significant wage. Thus, while lacking a high number of program graduates, each student completing a course in any of the welding processes can be realistically prepared for employment utilizing that particular process.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

2009-10

56

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>1</u> |
| 2008-09 | <u>0</u> |
| 2009-10 | <u>1</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>216</u> |
|-----------|------------|

| |
|--|
| <p style="text-align: center;">PROGRAM REVIEW College of Southern Nevada <i>Welding Technology, Certificate of Achievement</i></p> |
|--|

I. Description of Program Reviewed

The mission of the College of Southern Nevada's Department of Welding Technology is to provide the most current and relevant instruction in welding and welding related processes available thus insuring individuals develop the skills and knowledge necessary to become gainfully employed in the field of welding in order to adequately meet the demands of industry and business within the local community.

II. Review Process and Criteria

This academic program review was performed based on policy and procedures adopted by the CSN Faculty Senate effective January 2007. CSN faculty, department chair, dean, and members of the advisory committee participated. This program is accredited by the American Welding Society and curriculum standards are developed from AWS certification criteria.

III. Major Findings and Conclusions of the Program Review

The principal area of concern is a general lack of degree completers as a ratio to program majors. Paradoxically, this is a pattern which can be viewed as students' successful attainment of the skills and knowledge required to become gainfully employed in the welding field.

Welding encompasses four major processes, all of which are taught at the College of Southern Nevada. These include Shielded Metal Arc Welding (SMAW), also referred to as stick welding, Gas Metal Arc Welding (GMAW), also referred to as Mig, or simply wire – feed welding, Flux Cored Arc Welding (FCAW) and Gas Tungsten Arc Welding (GTAW), also referred to as Tig welding.

Each of these processes can be independently learned, and with that knowledge base, employment opportunities can be readily available at a significant wage. Thus, while lacking a high number of program graduates, each student completing a course in any of the welding processes can be realistically prepared for employment utilizing that particular process.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

2009-10

7

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>1</u> |
| 2008-09 | <u>1</u> |
| 2009-10 | <u>0</u> |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>216</u> |
|-----------|------------|

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Great Basin College

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ANNUAL REVIEW OF PROGRAMS

Title 4, Chapter 14, Section 4

Institution: Great Basin College

Academic Year of Review: 2009-10

In 2009-10, Great Basin College engaged in a comprehensive review of the courses needed for fulfillment of its general education requirements. Consequently, no programs of study leading to the attainment of a degree or certificate were reviewed in this academic year.

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Truckee Meadows Community College

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ANNUAL REVIEW OF PROGRAMS

Title 4, Chapter 14, Section 4

Institution: Truckee Meadows Community College **Academic Year of Review:** 2009-2010

- I. List the existing programs and corresponding degree level for all programs that were reviewed over the past year, (e.g. Economics, Bachelor of Science).***

Dental Assisting, A.A.S.
Fine Arts, A.A.

- II. List any programs and corresponding degree level for all programs that were eliminated or placed on inactive status this past year (Political Science, Master of Arts).***

Applied Anthropology, A.A.
Elementary Education, A.A.
Secondary Education, A.A.

- III. List all new programs and corresponding degree level for all programs that received Board approval this past year (e.g. History, Bachelor of Arts).***

Civil Engineering Practitioner, A.A.S.

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW <i>Truckee Meadows Community College</i> <i>Dental Assisting, A.A.S.</i></p> |
|---|

I. Description of Program Reviewed

The Dental Assisting program at TMCC is accredited by the Commission on Dental Accreditation (CODA) and is the only program in northern Nevada providing an avenue for dental assisting students to complete with a certificate that is recognized by the Dental Assisting National Board qualifying them to sit for the Certified Dental Assistant board exam immediately after program completion. Students who attend a private program not accredited by CODA must work two years full-time to challenge the board exam. A demonstrated need for an accredited dental assisting program exists. Students are being hired and filling a need in the dental community.

II. Review Process and Criteria

The program review process starts with the preparation of a self study and continues with a presentation of the review to the college community and other interested parties. The self study describes the program and addresses issues in demographics and enrollment, curriculum, student success, and resources. The report is reviewed by the Program and Discipline Review Committee, which validates the work of the self study, provides a broad institutional overview and reports the results to the Academic Standards Committee. The report is sent to the dean of the area for input and then to the Vice President of Academic Affairs and Student Services who prepares a report for the President. Upon approval of the President, the Vice President charges the department and dean to implement the recommendations.

III. Major Findings and Conclusions of the Program Review

The Dental Assisting faculty work hard for their students and the community. Faculty are committed to the program and student success is very high. The program has strong community support as well as a strong and active advisory board. The Dental Assisting and Dental Hygiene programs provide an extensive number of hours of volunteer time in the community. The program recently created and provided professional development opportunities for the dental community. The accreditation self-study revealed that employment for students remains good, employers are happy with the students, alumni are happy with the program, and the pre- and post-test scores are outstanding for those students taking the national board exam. The program is thriving in tough economic times, providing opportunities to expand, enhance, and improve the program, and adding a considerable number of FTE.

The following recommendations were made to strengthen the program:

- Identify methods used to recruit students that support the increase of underserved populations.

- Collaborate with the Dental Hygiene program to propose an equipment replacement budget and present to the dean.
- Continue to explore opportunities to collaborate with the UNLV Dental School.
- Pursue grant opportunities to fund digital radiology equipment for students.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|-----------|
| 2009-10 | <u>74</u> |
|---------|-----------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>3</u> |
| 2008-09 | <u>2</u> |
| 2009-10 | <u>4</u> |

*Note: Years are defined as summer, fall, and spring. For example, degree year 2006-07 would include degrees granted in August 2006, December 2006 and May 2007.

C. Headcount of students in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>161</u> |
|-----------|------------|

| |
|--|
| <p style="text-align: center;">PROGRAM REVIEW <i>Truckee Meadows Community College</i> <i>Fine Arts, A.A.</i></p> |
|--|

I. Description of Program Reviewed

The Fine Arts program at TMCC is broad in scope and diverse in nature, and can be divided into three areas for the purpose of better describing its characteristics: Art History, Fine Arts and the Art Galleries. Each of these three disciplines has a mission specific to its focus; however, they all share a common principal Art mission.

The Fine Arts program has been designed to give students a strong foundation in the aesthetic, technical and historic application of art as not only a concept, but an integral part of daily life; from academic to abstract thinking and personal creative development. This benefits the community as a whole by developing citizens with a higher level of sensitivity and understanding of the visual information that surrounds them every day. The program works to develop the desire for lifelong achievement and learning, the ability to reach goals, personal growth and quality of life in all students.

The Art History emphasis and the Fine Arts program additionally provide for an Associate of Arts degree, enabling students to move into a four-year educational institution prepared to complete the final two years of a baccalaureate degree in the Fine Arts. If continued formal education is not desired by a student, what is gained through the program enables the student to be competitive with a job market that requires artistic skills and experiences beyond the secondary level of educational achievement. The Art History emphasis differs from studio art in that it is a purely academic discipline with an emphasis on writing and critical thinking skills.

The mission of the Art Galleries program is to serve as an educational resource for the various art classes on campus and to enhance and enrich the lives of the TMCC faculty, staff and students as well as members of the community through the exhibition of visual art and to promote and generate interaction and dialogue among visual artists and between visual artists and the public.

II. Review Process and Criteria

The program review process starts with the preparation of a self study and continues with a presentation of the review to the college community and other interested parties. The self study describes the program and addresses issues in demographics and enrollment, curriculum, student success, and resources. The report is reviewed by the Program and Discipline Review Committee, which validates the work of the self study, provides a broad institutional overview and reports the results to the Academic Standards Committee. The report is sent to the dean of the area for input and then to the Vice President of Academic Affairs and Student Services who prepares a report for the

President. Upon approval of the President, the Vice President charges the department and dean to implement the recommendations.

III. Major Findings and Conclusions of the Program Review

The faculty are very dedicated and clearly committed to student success. Art is a unique and quite different curriculum requiring people who are in the know to oversee operations. Few really know the proper protocol with art. It takes years of training for an art professional to learn and be attentive to the detail required for this undertaking. The TMCC Art Galleries program has been very successful. Over the past eight years, 170 exhibitions have been selected and displayed on a limited budget of \$5,000 or less per year.

The following recommendations were made to strengthen the program:

- Common course numbering and articulation issues are a continuing problem; develop and implement a method to address these issues.
- Aggressive pursuit of grant opportunities is highly recommended to support student and program needs.
- Faculty need to attend training workshops to enhance their assessment skills as a key element of their professional development so that they become more effective at gathering and analyzing data to enhance assessment of their courses and program.

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | |
|---------|------------|
| 2009-10 | <u>161</u> |
|---------|------------|

B. Number of graduates from the program for the following years:

| | |
|---------|----------|
| 2007-08 | <u>3</u> |
| 2008-09 | <u>4</u> |
| 2009-10 | <u>4</u> |

*Note: Years are defined as summer, fall, and spring. For example, degree year 2006-07 would include degrees granted in August 2006, December 2006 and May 2007.

C. Headcount of students in any course related to the program (duplicated):

| | |
|-----------|--------------|
| Fall 2009 | <u>1,091</u> |
|-----------|--------------|

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Western Nevada College

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ANNUAL REVIEW OF PROGRAMS

Title 4, Chapter 14, Section 4

Institution: Western Nevada College

Academic Year of Review: 2009-10

I. List the existing programs and corresponding degree level for all programs that were reviewed over the past year (e.g. Economics, Bachelor of Science).

Biological Sciences, A.S.
Criminal Justice, A.A.
Criminal Justice, A.A.S.
Criminal Justice - Law Enforcement Academy, A.A.S.
Criminal Justice - Law Enforcement Academy, Certificate of Achievement
Graphic Communications, A.A.S.
Graphic Communications, Certificate of Achievement
Machine Tool Technology, A.A.S.
Machine Tool Technology, Certificate of Achievement

II. List any programs and corresponding degree level for all programs that were eliminated or placed on inactive status this past year (e.g. Political Science, Master of Arts).

Health Information Technology, A.A.S.
Paralegal Studies, A.A.S.

III. List all new programs and corresponding degree level for all programs that received Board approval this past year (e.g. History, Bachelor of Arts).

none

PROGRAM REVIEW
Western Nevada College
Biological Sciences, A.S.

I. Description of Program Reviewed

The Biological Sciences emphasis is designed to equip students with basic and applied knowledge in general biology with an emphasis in critical thinking, bioethical issues, a basic understanding of science and its methods, and laboratory and analytical skills related to the field of biology. Students are prepared to pursue studies in the fields of, but not limited to, biology, environmental studies, pre-health care, biochemistry, biotechnology, or as preparation for a teaching career. The 63-credit program requires 39 credits in the emphasis and 24 general education credits.

II. Review Process and Criteria

The Associate of Science in Biological Sciences program was reviewed 2009-2010 in order to identify program strengths and challenges in terms of student success and satisfaction, recruitment, enrollment, curriculum, and scheduling. Institutional Research staff provided data used as evidence to support findings and recommendations.

The self-study process followed program review guidelines developed by WNC's Program Assessment and Review Committee (PARC). Internal and external reviewers provided feedback on the self-study report as well as findings and recommendations based on review of the self-study report, a tour of the Carson City campus facilities, an exit interview with the President and Vice President of Academic and Student Affairs, and a focus group discussion with students from the program. An English professor from WNC served as the internal reviewer, and the Dean of the School of Science & Mathematics from CSN served as the external reviewer.

III. Major Findings and Conclusions of the Program Review

Commendations

- Program faculty participate in outreach events, such as College Day, Native American Day, and Ninth-Grade Women in Nontraditional Careers Day.
- The cadaveric facilities on the Carson campus are an asset.
- Program faculty and administrators strive to educate and prepare rural students for jobs in the health care field.
- To improve student success rates in pre-nursing biology classes, the minimum grade requirement for prerequisite courses has been raised to a "C," beginning fall 2010.

Findings, Recommendations, and Actions Taken

Recommendations (in italics) are attributed as follows: Program Review Team [P]; Internal Reviewer [I]; External Reviewer [E].

- The number of students with declared majors in Biological Sciences is increasing but few are attaining the degree.
Action taken: The degree was brought into closer alignment with four-year institutions with the following changes to the curriculum, effective fall 2010: BIOL208 (Human

Genetics), 223 and 224 (*Human Anatomy and Physiology I and II*), 251 (*General Microbiology*), and MATH182 (*Calculus II*) were removed as emphasis electives and CHEM220 (*Introductory Organic Chemistry*) was added. [P]

Recommendation: Enforce all published prerequisites in the emphasis to ensure that students are prepared for the coursework. [P,I,E]

Recommendation: Evaluate the need for the A.S. in Biological Sciences at WNC in its current form. [P]

Recommendation: Encourage back transfer of classes to increase the graduation rate. [P,E]

Recommendation: Develop a new course sequence and reevaluate prerequisites to improve student success rates in CHEM121 (*General Chemistry I*) and BIOL190 (*Introduction to Cell and Molecular Biology*) and to more closely align with programs at other NSHE institutions. [P]

Recommendation: Research the possibility of combining Chemistry and Biological Sciences emphases into an A.S. in Natural Sciences. [P]

Recommendation: Research the possibility of creating an Integrated Health sub-emphasis for pre-nursing students who do not make it into the nursing program. [P]

- Not one emphasis course addresses at a significant level the program student learning outcome to “develop an understanding of the history and philosophy of science as well as its relationship to society and the daily lives of students.” All four required biology courses moderately address the outcome, and all but one of the remaining courses in chemistry, math, and physics slightly address it.

Recommendation: Significantly address this outcome with a specific course that would further develop students’ critical thinking skills and improve student satisfaction. [I]

- Some students who participated in the focus group discussion felt that while they were sometimes overwhelmed with factual information, there were few opportunities in emphasis courses to respond to material as critical thinkers.

Recommendation: Provide opportunities for students to respond to material in ways that require critical thinking, including reflecting on bioethical issues, a goal that aligns with the program’s mission. [I]

- Depending on the general education courses students take, they may not meet three of the 10 general education student learning outcomes: SLO #5 (have appropriate technological skills, including computer skills), SLO #6 (know the basic principles and processes of government at the local, state, national and international levels), and SLO #8 (understand and apply social science principles, including an appreciation of participation in civic affairs).

Recommendation: Ensure that all 10 general education student learning outcomes are addressed in the program regardless of general education classes selected to fulfill general education requirements. [P,E]

- Students are not afforded equitable access to pre-nursing biology classes.

Recommendation: Limit course repetition in BIOL223, 224, and 251 to two times within a five-year period. [P]

Recommendation: Set up the new PeopleSoft student information system to delay enrollments into BIOL223, 224, and 251 until final grades in prerequisite courses have been posted for all sections. [P,E]

- Learning objectives for BIOL190 and 190L are not consistent across all sections.
Recommendation: Develop and publicize consistent learning objectives for use in all sections. In addition, design and implement common pre- and post-assessments to assess the effectiveness of instruction across sections. [P]
Recommendation: Maintain diversity of instruction by resisting over-defining course objectives for all sections. [E]
- The quality of lab facilities is not consistent at the three campuses.
Recommendation: Continue upgrades to facilities on all campuses, including media equipment, storage, furnishings, and fixtures. [P,E]
Recommendation: Expand cadaveric facilities to all campuses. [P,E]

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

2009-10 177 (does not include summer 2010)

B. Number of graduates from the program for the following years:

2007-08 0

2008-09 1

2009-10 0 (partial data for spring 2010; no data for summer 2010)

C. Headcount of students enrolled in any course related to the program (duplicated):

Fall 2009 775

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| <p style="text-align: center;">PROGRAM REVIEW <i>Western Nevada College</i> <i>Criminal Justice, A.A.</i></p> |
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I. Description of Program Reviewed

The Criminal Justice transfer emphasis is an associate of arts degree for students who are planning to transfer to UNR, UNLV, or any other four-year institution. Students who complete the program are expected to be able to articulate the legal requirements of search and seizure, recognize and evaluate criminal law, process crime scenes, and analyze theories for committing crimes, among other outcomes. The 60-credit program requires 21-24 credits in the emphasis and 36-39 credits of general education.

II. Review Process and Criteria

Four criminal justice programs were reviewed together in 2009-2010 in order to identify strengths and challenges in terms of student success and satisfaction, recruitment, enrollment, curriculum, and scheduling. The A.A. in Criminal Justice emphasis program was reviewed along with two A.A.S. programs and one certificate of achievement program. Institutional Research staff provided data used as evidence to support findings and recommendations.

The self-study process followed program review guidelines developed by WNC's Program Assessment and Review Committee (PARC). Internal and external reviewers provided feedback on the self-study report as well as findings and recommendations based on review of the self-study report, a tour of facilities, an exit interview with the President and the Vice President of Academic and Student Affairs, and a focus group discussion with students from all four programs. An English professor from WNC served as the internal reviewer. Two individuals served as external reviewers: a professor and former chairman of UNR's Department of Criminal Justice, and a Storey County law enforcement professional who teaches criminal justice classes part-time at WNC.

III. Major Findings and Conclusions of the Program Review

Commendations

- Full-time and adjunct criminal justice faculty are dedicated and share a high level of *esprit de corps*.
- Criminal justice programs serve the needs of area law enforcement agencies well.

Findings and Recommendations

Recommendations (in italics) are attributed as follows: Program Review Team [P]; Internal Reviewer [I]; External Reviewer [E].

- At present, the program has no coordinator responsible for ensuring academic rigor and integrity for all criminal justice degree and certificate of achievement programs.
Recommendation: When the budget improves, re-establish the program coordinator position to oversee recruitment, faculty evaluations, curriculum, and scheduling and to improve program consistency across campuses in Carson, Fallon, and Douglas. [P,I,E]
- The curriculum is heavily weighted toward law enforcement.
Recommendation: Offer as electives a greater variety of courses in courts and

corrections (e.g. courses in victimology, comparative justice systems) to better serve the needs of students seeking careers in subsystems other than law enforcement. [I,E]

- No opportunity for interning exists.

Recommendation: Offer an elective internship course to upper-level students as is required of programs seeking to meet Academy of Criminal Justice Sciences standards. [I,E]

- Overlap and redundancies exist in the course descriptions and objectives for CRJ 220 (Criminal Procedures), 230 (Criminal Law), 222 (Criminal Law and Procedure), and 225 (Criminal Evidence).

Recommendation: Retain CRJ 222, which combines criminal law and procedures into one course in keeping with the national trend, and eliminate CRJ 220 and 230. Review and update course outlines to eliminate remaining redundancies. [I,E]

- The CRJ 101 (Introduction to Criminal Justice I) prerequisite for CRJ 222 (Criminal Law and Procedure) is not enforced, so students are allowed to enter CRJ 222 out of sequence and unprepared.

Recommendation: Enforce the CRJ 101 prerequisite for CRJ 222 so that students are properly prepared for the course. [I,E]

- Two core requirements for the degree, CRJ 164 (Principles of Investigation) and CRJ 225 (Criminal Evidence), serve only those students interested in law enforcement and not those interested in other subsystems.

Recommendation: Offer these courses as program electives. [I,E]

- Currently both CRJ 101 and 102 are offered in both the spring and the fall.

Recommendation: Offer the courses sequentially so that they don't compete for enrollment. [I,E]

- Graduates of the program are not in good position to complete a B.A. in Criminal Justice at UNR within four years even though they transfer in as juniors.

Recommendation: Review and update transfer agreements with UNR and UNLV on a regular basis to ensure that course articulations are current and understood by all parties. [I,E]

Recommendation: Make changes to the curriculum to enable students who are transferring to UNR to complete a bachelor's degree in four years, including requiring four semesters of a foreign language and a statistics course. [I,E]

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

2009-10 149 (does not include summer 2010)

B. Number of graduates from the program for the following years:

2007-08 9

2008-09 14

2009-10 6 (partial data for spring 2010; no data for summer 2010)

C. Headcount of students enrolled in any course related to the program (duplicated):

Fall 2009 409

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| <p style="text-align: center;">PROGRAM REVIEW <i>Western Nevada College</i> <i>Criminal Justice, A.A.S.</i></p> |
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I. Description of Program Reviewed

The Criminal Justice Associate of Applied Science degree prepares students for criminal justice careers in probation and parole, corrections, juvenile justice and law enforcement. With this degree, students will understand the basics of criminal law and law enforcement pertaining to each of these career areas. The 60-credit program requires 36 core and emphasis credits and 24 general education credits.

II. Review Process and Criteria

Four criminal justice programs were reviewed together in 2009-2010 in order to identify program strengths and challenges in terms of student success and satisfaction, recruitment, enrollment, curriculum, and scheduling. The A.A.S. in Criminal Justice program was reviewed along with one other A.A.S. program, an A.A. program, and one certificate of achievement program. Institutional Research staff provided data used as evidence to support findings and recommendations.

The self-study process followed program review guidelines developed by WNC's Program Assessment and Review Committee (PARC). Internal and external reviewers provided feedback on the self-study report as well as findings and recommendations based on review of the self-study report, a tour of facilities, an exit interview with the President and the Vice President of Academic and Student Affairs, and a focus group discussion with students from all four programs. An English professor from WNC served as the internal reviewer. Two individuals served as external reviewers: a professor and former chairman of UNR's Department of Criminal Justice, and a Storey County law enforcement professional who teaches criminal justice classes part-time at WNC.

III. Major Findings and Conclusions of the Program Review

Commendations

- Full-time and adjunct criminal justice faculty are dedicated and share a high level of *esprit de corps*.
- Criminal justice programs serve the needs of area law enforcement agencies well.

Findings and Recommendations

Recommendations (in italics) are attributed as follows: Program Review Team [P]; Internal Reviewer [I]; External Reviewer [E].

- WNC offers too many degree and certificate programs in criminal justice, causing resources to be spread too thin.
Recommendation: Consider terminating the A.A.S. in Criminal Justice program in its current form to concentrate resources on the A.A. transfer degree and the Western Nevada State Peace Officer Academy, a 27-credit component of the Criminal Justice Law Enforcement/Academy A.A.S. and Certificate of Achievement. [P,I,E]

- At present, there is no program coordinator responsible for ensuring academic rigor and integrity for all criminal justice degree and certificate of achievement programs.
Recommendation: When the budget improves, re-establish the program coordinator position to oversee recruitment, faculty evaluations, curriculum, and scheduling and to improve program consistency across campuses in Carson, Fallon, and Douglas. [P,I,E]
- The curriculum is heavily weighted toward law enforcement.
Recommendation: Offer as electives a greater variety of courses in courts and corrections (e.g. courses in victimology and comparative justice systems) to better serve the needs of students seeking careers in subsystems other than law enforcement. [I,E]
- No opportunity for an internship exists.
Recommendation: Offer an elective internship course to upper-level students as is required of programs seeking to meet Academy of Criminal Justice Sciences standards. [I,E]
- Overlap and redundancies exist in the course descriptions and objectives for CRJ 220 (Criminal Procedures), 230 (Criminal Law), 225 (Criminal Evidence), and 265 (Introduction to Physical Evidence).
Recommendation: Retain CRJ 222, which combines criminal law and procedures into one course in keeping with the national trend, and eliminate CRJ 220 and 230. Review and update course outlines to eliminate remaining redundancies. [I,E]
- Three core and emphasis requirements—CRJ 164 (Principles of Investigation), CRJ 225 (Criminal Evidence), and CRJ 265 (Introduction to Physical Evidence)—serve only those students interested in law enforcement and not those interested in other subsystems.
Recommendation: Offer those courses as electives. [I,E]
- Currently both CRJ 101 (Introduction to Criminal Justice I) and 102 (Introduction to Criminal Justice II) are offered in both the spring and the fall, causing them to compete for enrollment.
Recommendation: Offer CRJ 101 in the fall and CRJ 102 in the spring. [I,E]

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

2009-10 138 (does not include summer 2010)

B. Number of graduates from the program for the following years:

2007-08 4

2008-09 4

2009-10 3 (partial data for spring 2010; no data for summer 2010)

C. Headcount of students enrolled in any course related to the program (duplicated):

Fall 2009 445

PROGRAM REVIEW
Western Nevada College
Criminal Justice: Law Enforcement/Academy, A.A.S.

I. Description of Program Reviewed

The Law Enforcement Academy emphasis is designed to prepare students for various careers within the field of criminal justice. In Nevada, a Category I and III POST Certificate is necessary for most local and state jobs in the criminal justice field. This major, with the 27-credit Western Nevada State Peace Officer Academy (WNSPOA) as the emphasis, allows a student to go directly into a criminal justice career in Nevada. The program requires 51.5 core and emphasis credits and 12 general education credits.

II. Review Process and Criteria

Four criminal justice programs were reviewed together in 2009-2010 in order to identify program strengths and challenges in terms of student success and satisfaction, recruitment, enrollment, curriculum, and scheduling. The A.A.S in Criminal Justice with an emphasis in Law Enforcement/Academy was reviewed along with one other A.A.S. degree program, an A.A. degree program, and one certificate of achievement program. Institutional Research staff provided data used as evidence to support findings and recommendations.

The self-study process followed program review guidelines developed by WNC's Program Assessment and Review Committee (PARC). Internal and external reviewers provided feedback on the self-study report as well as findings and recommendations based on review of the self-study report, a tour of facilities, an exit interview with the President and the Vice President of Academic and Student Affairs, and a focus group discussion with students from all four programs. An English professor from WNC served as the internal reviewer. Two individuals served as external reviewers: a professor and former chairman of UNR's Department of Criminal Justice, and a Storey County law enforcement professional who teaches criminal justice classes part-time at WNC.

III. Major Findings and Conclusions of the Program Review

Commendations

- Full-time and adjunct criminal justice faculty are dedicated and share a high level of *esprit de corps*.
- Criminal justice programs serve the needs of area law enforcement agencies well.
- The WNSPOA has high graduation and agency placement rates. Since 1996, 100% of graduates have passed their state certification exam. From 2006-2008, 97% of graduates were employed upon graduation.
- The WNSPOA was deemed to be in substantial compliance with Peace Officers' Standards and Training requirements in a 2009 Nevada POST audit.
- The academy does a good job of making applicants aware of a pre-physical fitness qualification.

Findings and Recommendations

Recommendations (in italics) are attributed as follows: Program Review Team [P]; Internal Reviewer [I]; External Reviewer [E].

- WNC offers too many degree and certificate programs in criminal justice, causing resources to be spread too thin.
Recommendation: Consider terminating the A.A.S. in Criminal Justice Law Enforcement/Academy program in its current form to concentrate resources on the A.A. transfer degree and the WNSPOA, a 27-credit component of the Criminal Justice Law Enforcement/Academy A.A.S. and Certificate of Achievement. [P,I,E]
- At present, there is no coordinator responsible for ensuring academic rigor and integrity for all criminal justice degree and certificate programs.
Recommendation: When the budget improves, re-establish the program coordinator position to oversee recruitment, faculty evaluations, curriculum, and scheduling and to improve program consistency across campuses in Carson, Fallon, and Douglas. [P,I,E]
- No opportunity for interning exists.
Recommendation: Offer an elective internship course to upper-level students as is required of programs seeking to meet Academy of Criminal Justice Sciences standards. [I,E]
- Prior to enrolling in the academy, some individuals may not be aware of weapons/range qualifications and report writing competencies required for graduation.
Recommendation: Make applicants aware of these required outcomes through the college website and printed materials. [P,I,E]
- Overlap and redundancies exist in the course descriptions and objectives for CRJ 220 (Criminal Procedures) and 230 (Criminal Law).
Recommendation: Require CRJ 222, which combines criminal law and procedures into one course in keeping with the national trend, in place of CRJ 220 and 230. [I,E]
- Currently both CRJ 101 (Introduction to Criminal Justice I) and 102 (Introduction to Criminal Justice II) are offered both in the spring and the fall, causing them to compete for enrollment.
Recommendation: Offer CRJ 101 in the fall and CRJ 102 in the spring. [I,E]

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

2009-10 88 (does not include summer 2010)

B. Number of graduates from the program for the following years:

2007-08 2

2008-09 2

2009-10 2 (partial data for spring 2010; no data for summer 2010)

C. Headcount of students enrolled in any course related to the program (duplicated):

Fall 2009 416

PROGRAM REVIEW

Western Nevada College

Criminal Justice: Law Enforcement/Academy, Certificate of Achievement

I. Description of Program Reviewed

The purpose of the Certificate of Achievement in Law Enforcement is to ensure that the students have the necessary knowledge and skills to become a peace officer in the state of Nevada, and to take and pass the Peace Officers' Standards and Training (POST) test. The program requires 33.5 credits of core courses, 27 of which are earned by completing the Western Nevada State Peace Officer Academy (WNSPOA), and six general education credits.

II. Review Process and Criteria

Four criminal justice programs were reviewed together in 2009-2010 in order to identify program strengths and challenges in terms of student success and satisfaction, recruitment, enrollment, curriculum, and scheduling. The Certificate of Achievement in Criminal Justice with an emphasis in Law Enforcement/Academy was reviewed along with the A.A. in Criminal Justice emphasis and two A.A.S. degree programs. Institutional Research staff provided data used as evidence to support findings and recommendations.

The self-study process followed program review guidelines developed by WNC's Program Assessment and Review Committee (PARC). Internal and external reviewers provided feedback on the self-study report as well as findings and recommendations based on review of the self-study report, a tour of facilities, an exit interview with the President and the Vice President of Academic and Student Affairs, and a focus group discussion with students from all four programs. An English professor from WNC served as the internal reviewer. Two individuals served as external reviewers: a professor and former chairman of UNR's Department of Criminal Justice, and a Storey County law enforcement professional who teaches criminal justice classes part-time at WNC.

III. Major Findings and Conclusions of the Program Review

Commendations

- Full-time and adjunct criminal justice faculty are dedicated and share a high level of *esprit de corps*.
- Criminal justice programs serve the needs of area law enforcement agencies well.
- The academy does a good job of making applicants aware of a pre-physical fitness qualification.
- WNSPOA was deemed to be in substantial compliance with POST requirements in a 2009 Nevada POST audit.

Findings and Recommendations

Recommendations (in italics) are attributed as follows: Program Review Team [P]; Internal Reviewer [I]; External Reviewer [E].

- At present, there is no program coordinator responsible for ensuring academic rigor and integrity for all criminal justice associate's degree and certificate of achievement programs.
Recommendation: When the budget improves, re-establish the program coordinator position to oversee recruitment, faculty evaluations, curriculum, and scheduling and to improve program consistency across campuses in Carson, Fallon, and Douglas. [P,I,E]
- Prior to enrolling in the academy, some individuals may not be aware of weapons/range qualifications and report writing competencies required for graduation.
Recommendation: Make applicants aware of these required outcomes through the college website and printed materials. [P,I,E]
- Students are interested in earning POST academy certification, but there has been only one who has completed the certificate of achievement program since 2004-05. The national trend is to move away from such certificate of achievement programs.
Recommendation: Unless the certificate of achievement program can be promoted in a concerted way to POST academy graduates, terminate the program in order to concentrate resources on the A.A. transfer degree and the WNSPOA, a 27-credit component of the Criminal Justice Law Enforcement/Academy A.A.S. and Certificate of Achievement. [P,I,E]

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

2009-10 18 (does not include summer 2010)

B. Number of graduates from the program for the following years:

2007-08 0

2008-09 0

2009-10 0 (partial data for spring 2010; no data for summer 2010)

C. Headcount of students enrolled in any course related to the program (duplicated):

Fall 2009 87

PROGRAM REVIEW
Western Nevada College
Graphic Communications, A.A.S.

I. Description of Program Reviewed

The Associate of Applied Science in Graphic Communications program is designed for students who want quick access to career fields involving print design, web design, multimedia, digital video, and animation. Graduates of the program are expected to research design problems, demonstrate technical skills, implement design concepts, work collaboratively, and perform successful presentations. The degree requires 63 total credits: 45 program-specific credits and 18 general education credits.

II. Review Process and Criteria

The A.A.S. and Certificate of Achievement in Graphic Communications were reviewed together 2009-2010 in order to identify program strengths and challenges in terms of student success and satisfaction, recruitment, enrollment, curriculum, and scheduling. Institutional Research staff provided data used as evidence to support findings and recommendations.

The self-study process followed program review guidelines developed by WNC's Program Assessment and Review Committee (PARC). Internal and external reviewers provided feedback on the self-study report as well as findings and recommendations based on review of the self-study report, a tour of facilities, an exit interview with the President and Vice President of Academic and Student Affairs, and a focus group discussion with students from both the A.A.S. and certificate of achievement programs. WNC's Director of Library and Instructional Technology served as the internal reviewer, and a Graphic Communications professor from TMCC served as the external reviewer.

III. Major Findings and Conclusions of the Program Review

Commendations

- The program serves businesses in the community, including Bently Pressurized Bearing, the Nevada Appeal, the Nevada State Museum, the Nevada Department of Transportation, and smaller design studios.
- Program faculty make presentations annually at outreach and recruitment events: "Tech Prep College Day," "Senior College Day," Carson High School's "Your Future's So Bright Day," AT&T's "Women in Non-Traditional Careers Day" for ninth-grade girls, WNC's "College Day" for high school juniors and seniors, and "Career Days."
- The curriculum was revised to remain current with the industry. Changes included adding advanced web design and animation courses and increasing the total number of credits required for the degree from 60 to 63.
- The GRC 294B (Professional Portfolio) class prepares students for employment by requiring students to gather and present to a panel of industry professionals examples of artifacts demonstrating professional competencies.
- At the High Tech Center, a facility shared with and located at Carson High School, lab time is limited to 2:30-10 p.m. Monday through Thursday. To enable students to complete

homework on Fridays and Saturdays, design software was installed on Carson campus library computers. In addition, hardware and software in graphic communications classrooms and labs have been upgraded to remain current in the field.

- Course outlines were updated to include both general education and program student learning outcomes.
- The full-time faculty member works closely with the Graphic Communications Advisory Committee and local businesses to stay current with industry trends.

Findings, Recommendations, and Actions Taken

Recommendations (in italics) are attributed as follows: Program Review Team [P]; Internal Reviewer [I]; External Reviewer [E].

- The registration system has not been set up to enforce prerequisites for graphic communications courses, so students are allowed to enroll in courses for which they are unprepared.
Recommendation: Enforce prerequisites to ensure that students take courses in the proper sequence. [P,I,E]
- Fallon students may not be aware that they cannot complete the entire degree or certificate program on that campus.
Recommendation: Publish this information online and in the printed program guide. [P,I,E]
- Communication about curriculum and instruction between the Carson and Fallon faculty is inconsistent.
Action taken: A faculty liaison began facilitating better communication between faculty on the two campuses.
- Because of lower enrollments on the Fallon campus, some lower-level graphic communications classes are combined with higher-level classes, making it challenging to achieve the outcomes of both courses.
Recommendation: Offer only the beginning classes in Fallon, and require students to travel to Carson for the higher-level classes. [P]
- The High Tech Center is available only four evenings a week and is closed during the summer, severely limiting the schedule of offerings in Carson City.
Recommendation: Equip a lab on the Carson campus with the necessary design software in order to offer daytime and summer classes. [I]
- Faculty must continually upgrade their skills in order to stay current with changing technologies.
Recommendation: Identify consistent funding for ongoing faculty training. [P,I,E]
- Many students express an interest in earning a four-year graphic communications degree, but no Northern Nevada institution offers such a degree; therefore, students must either leave the area to complete a four-year degree in graphic communications or transfer to UNR to pursue a four-year degree in a different area.
Recommendation: Research the possibility of developing Bachelor of Technology in Graphic Communications. [P,E]
Recommendation: Research opportunities to develop transfer agreements with institutions in neighboring states. [P,I,E]

- Students are not required to declare their majors, so the college does not have reliable data.
Recommendation: Continue to advise students to declare their majors. [P]
- The American Institute of Graphic Artists (AIGA), the oldest and largest professional organization for design, provides valuable resources to its members and advances designing as a profession.
Recommendation: Maintain membership in AIGA for the full-time faculty member. [P,I,E]
- While the headcount of declared majors has increased steadily the past five years, the number of graduates declined steadily from nine in 2004-2009 to one in 2008-2009; however, 11 were expected to graduate in 2009-2010 (official data for the year is unavailable at this time).
Action Taken: The 2010-2011 curriculum was revised to keep the program relevant.
Action Taken: Some part-time faculty were replaced to improve the quality of instruction as well as retention and graduation rates.
Recommendation: Continue to monitor data, including student course evaluations. [P]
- Currently there is no system in place to track students after they graduate.
Recommendation: Develop and implement a system for tracking graduates. [P]
- Taking courses out of sequence could extend the time to graduation.
Action Taken: The suggested course sequence for the A.A.S. degree has been added to all course syllabi, and the full-time instructor meets with students to plan their schedules.
Recommendation: Enforce prerequisites to ensure that students take courses in the proper sequence. [P,I,E]
- Program accreditation by the National Association of Schools of Art and Design would increase the value of the degree.
Recommendation: Pursue NASAD accreditation. [P]

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

2009-10 80 (does not include summer 2010)

B. Number of graduates from the program for the following years:

2007-08 3

2008-09 1

2009-10 0 (partial data for spring 2010; no data for summer 2010)

C. Headcount of students enrolled in any course related to the program (duplicated):

Fall 2009 553

PROGRAM REVIEW
Western Nevada College
Graphic Communications, Certificate of Achievement

I. Description of Program Reviewed

The purpose of the Graphic Communications Certificate of Achievement is to provide basic knowledge and skills necessary to enter the graphic communications field. Graduates of the program should have acquired basic skills and performed tasks necessary for employment or career enhancement. The 30-credit program requires 21 program-specific credits and nine general education credits.

II. Review Process and Criteria

The Certificate of Achievement and A.A.S. in Graphic Communications were reviewed together 2009-2010 in order to identify program strengths and challenges in terms of student success and satisfaction, recruitment, enrollment, curriculum, and scheduling. Institutional Research staff provided data used as evidence to support findings and recommendations.

The self-study process followed program review guidelines developed by WNC's Program Assessment and Review Committee (PARC). Internal and external reviewers provided feedback on the self-study report as well as findings and recommendations based on review of the self-study report, a tour of facilities, an exit interview with the President and Vice President of Academic and Student Affairs, and a focus group discussion with students from both the Certificate of Achievement and A.A.S. programs. WNC's Director of Library and Instructional Technology served as the internal reviewer, and a Graphic Communications professor from TMCC served as the external reviewer.

III. Major Findings and Conclusions of the Program Review

Commendations

- The program serves businesses in the community, including Bently Pressurized Bearing, the Nevada Appeal, the Nevada State Museum, the Nevada Department of Transportation, and smaller design studios.
- Program faculty make presentations annually at outreach and recruitment events: "Tech Prep College Day," "Senior College Day," Carson High School's "Your Future's So Bright Day," AT&T's "Women in Non-Traditional Careers Day" for ninth-grade girls, WNC's "College Day" for high school juniors and seniors, and "Career Days."
- At the High Tech Center, a facility shared with and located at Carson High School, lab time is limited to 2:30-10 p.m. Monday through Thursday. To enable students to complete homework on Fridays and Saturdays, design software was installed on Carson campus library computers. In addition, hardware and software in graphic communications classrooms and labs have been upgraded to remain current in the field.
- Course outlines were updated to include both general education and program student learning outcomes.
- The full-time faculty member works closely with the Graphic Communications Advisory Committee and local businesses to stay current with industry trends.

Findings, Recommendations, and Actions Taken

Recommendations (in italics) are attributed as follows: Program Review Team [P]; Internal Reviewer [I]; External Reviewer [E].

- The registration system has not been set up to enforce prerequisites for graphic communications courses, so students are allowed to enroll in courses for which they are unprepared.
Recommendation: Enforce prerequisites to ensure that students take courses in the proper sequence. [P,I,E]
- Fallon students may not be aware that they cannot complete the entire degree or certificate program on that campus.
Recommendation: Publish this information online and in the printed program guide. [I,E]
- Communication about curriculum and instruction between the Carson and Fallon faculty is inconsistent.
Action taken: A faculty liaison began facilitating better communication between faculty on the two campuses.
- Because of lower enrollments on the Fallon campus, some lower-level graphic communications classes are combined with higher-level classes, making it challenging to achieve the outcomes of both courses.
Recommendation: Offer only the beginning classes in Fallon, and require students to travel to Carson for the higher-level classes. [P]
- The High Tech Center is available only four evenings a week and is closed during the summer, severely limiting the schedule of offerings in Carson City.
Recommendation: Equip a lab on the Carson campus with the necessary design software in order to offer daytime and summer classes. [I]
- Faculty must continually upgrade their skills in order to stay current with changing technologies.
Recommendation: Identify consistent funding for ongoing faculty training. [P,I,E]
- Students are not required to declare their majors, so the college does not have reliable data.
Recommendation: Continue to advise students to declare their majors. [P]
- The American Institute of Graphic Artists (AIGA), the oldest and largest professional organization for design, provides valuable resources to its members and advances designing as a profession.
Recommendation: Maintain membership in AIGA for the full-time faculty member. [P,I,E]

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

2009-10 5 (does not include summer 2010)

B. Number of graduates from the program for the following years:

2007-08 0

2008-09 2

2009-10 1 (partial data for spring 2010; no data for summer 2010)

C. Headcount of students enrolled in any course related to the program (duplicated):

Fall 2009 113

PROGRAM REVIEW
Western Nevada College
Machine Tool Technology, A.A.S.

I. Description of Program Reviewed

The Machine Tool Technology program provides training for students who plan to enter the machine trades field and upgrading for those in the field who desire additional skills. The program, which is offered on the Carson campus only, is competency based, allowing students to enter at their own level and progress at their own pace. Hands-on learning is stressed, allowing students to take as many laboratory hours as possible. The degree requires a total of 60 credits: 39 program requirement credits and 26 general education credits.

II. Review Process and Criteria

The A.A.S. and Certificate of Achievement in Machine Tool Technology were reviewed together 2009-2010 in order to identify strengths and challenges in terms of student success and satisfaction, recruitment, enrollment, curriculum, facilities, and scheduling. Institutional Research staff provided data used as evidence to support findings and recommendations.

The self-study process followed program review guidelines developed by WNC's Program Assessment and Review Committee (PARC). Internal and external reviewers provided feedback on the self-study report as well as findings and recommendations based on review of the self-study report, a tour of facilities, an exit interview with the President, and a focus group discussion with students with declared majors in the A.A.S. and certificate of achievement programs. A mathematics professor from WNC served as the internal reviewer, and an automotive technology teacher from Douglas High School served as the external reviewer.

III. Major Findings and Conclusions of the Program Review

The commendations, findings, and recommendations that resulted from this program review relate to the Machine Tool Technology program in general and not the individual degree or certificate programs specifically.

Commendations

- Of the two machinist programs in Nevada, WNC offers the only hands-on program.
- Local industry supports enrollment of high school students with scholarships of \$250 per semester.
- The tenured faculty member connects well with students and evaluates students to match their skills with employers' needs.

Findings and Recommendations

Recommendations (in italics) are attributed as follows: Program Review Team [P]; Internal Reviewer [I]; External Reviewer [E].

- Students are exposed to a dust hazard because grinders are used without a dust collection system.
Recommendation: Make improvements to the machine shop to eliminate the dust hazard either by adding 25,000-35,000 square feet to the building and installing a dust

collector at a cost of \$2 million, by moving grinders into a separate room currently used as a classroom and installing a dust collector, or by simply installing a dust collector. [P,I,E]

- Students would be better equipped to enter and succeed in the workforce if the program followed apprenticeship training standards valued by manufacturers not only locally but also statewide and nationwide.

Recommendation: Work with local manufacturers to identify or develop a set of standards for skills certification. Look into skills certification from the National Institute for Metalworking Skills (NIMS) for program graduates. [P,I,E]

Recommendation: Seek program accreditation through NIMS. [I]

- Bobcat, the computer-aided manufacturing software currently taught, is not used in industry as much as it once was, and students do not have access to Mastercam for Solidworks, the current industry standard software.

Recommendation: Seek funds to upgrade computer-aided manufacturing software to the industry standard. [P,I,E]

- Classes in MTT 292B and 293B (Computer-Aided Manufacturing I and II) as well as in DFT 110B (Blueprint Reading for Industry) and CONS120B (Blueprint Reading and Specification) have been canceled repeatedly due to low enrollments during the five-year review period.

Recommendation: Integrate a blueprint reading component into a new CAD/CAM or CNC course. [I]

- Although students are regularly assessed on sets of competencies, these assessments are not formally documented in a systematic way. In addition, students often lose skills after passing competency tests if they don't use the skills on a regular basis.

Recommendation: Perform and document cumulative assessment of competencies. [I,E]

- Manufacturers want to hire employees who have mastered all the basic skills, and Nevada lacks a full-time (five days per week, eight hours per day) apprenticeship program that would last one year and provide the intensive training in the basics that employers value.

Recommendation: Assess the need for an intensive daytime apprenticeship program. [P,I,E]

- The use of wire electrical discharge machines (wire EDM) in manufacturing has increased greatly, creating the need for machine tool technology students to acquire the skills to operate them.

Recommendation: Propose a grant to purchase a used wire EDM. [P,I,E]

- Although students express their desire to take machine tool classes in the summer, currently none are offered.

Recommendation: Offer machine tool classes during the summer. [E]

- Transportation issues present challenges to high school students wishing to attend WNC.

Recommendation: Recruit high school students from Douglas, Lyon and Washoe counties and continue to work with schools to solve transportation issues. [I]

- Some high school students have enrolled in machine tool technology classes as a way to make up for credit deficiencies even though they are not interested in machining for a living.

Recommendation: When recruiting from high schools, screen out students who are credit deficient and not seriously interested in the field. [P,I,E]

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

2009-10 44 (does not include summer 2010)

B. Number of graduates from the program for the following years:

2007-08 2

2008-09 1

2009-10 3 (partial data for spring 2010; no data for summer 2010)

C. Headcount of students enrolled in any course related to the program (duplicated):

Fall 2009 202

| |
|---|
| <p style="text-align: center;">PROGRAM REVIEW Western Nevada College <i>Machine Tool Technology, Certificate of Achievement</i></p> |
|---|

I. Description of Program Reviewed

The mission of the Certificate of Achievement in Machine Tool Technology program is to provide the student with the skills and knowledge to succeed in the machining industry. The certificate requires thirty credits of courses in blueprint reading, machine shop skills and practice, and computer numerical control. Courses in writing, human relations, and mathematics are required to fulfill the 10-credit general education requirement.

II. Review Process and Criteria

The Certificate of Achievement and A.A.S. in Machine Tool Technology were reviewed together 2009-2010 in order to identify strengths and challenges in terms of student success and satisfaction, recruitment, enrollment, curriculum, and scheduling. Institutional Research staff provided data used as evidence to support findings and recommendations.

The self-study process followed program review guidelines developed by WNC's Program Assessment and Review Committee (PARC). Internal and external reviewers provided feedback on the self-study report as well as findings and recommendations based on review of the self-study report, a tour of facilities, an exit interview with the President, and a focus group discussion with students from the certificate of achievement and A.A.S. programs. A mathematics professor from WNC served as the internal reviewer, and an automotive technology teacher from Douglas High School served as the external reviewer.

III. Major Findings and Conclusions of the Program Review

The commendations and recommendations that resulted from this program review relate to the Machine Tool Technology program in general and not the individual degree or certificate programs specifically.

Commendations

- WNC offers one of only two machinist programs in Nevada, and WNC's is the only hands-on program.
- Local industry supports enrollment of high school students with scholarships (\$250 per semester).
- The tenured faculty member connects well with students and evaluates students to match their skills with employers' needs.

Findings and Recommendations

Recommendations (in italics) are attributed as follows: Program Review Team [P]; Internal Reviewer [I]; External Reviewer [E].

- Students are exposed to a dust hazard because grinders are used without a dust collection system.

Recommendation: Make improvements to the machine shop to eliminate the dust hazard either by adding 25,000-35,000 square feet to the building and installing a dust collector at a cost of \$2 million, by moving grinders into a separate room currently

used as a classroom and installing a dust collector, or by simply installing a dust collector. [P,I,E]

- Students would be better equipped to enter and succeed in the workforce if the program followed apprenticeship training standards valued by manufacturers not only locally but also statewide and nationwide.

Recommendation: Work with local manufacturers to identify or develop a set of standards for skills certification. Look into skills certification from the National Institute for Metalworking Skills (NIMS) for program graduates. [P,I,E]

Recommendation: Seek program accreditation through NIMS. [I]

- Although students are regularly assessed on sets of competencies, these assessments are not formally documented in a systematic way. In addition, students often lose skills after passing competency tests if they don't use the skills in the meantime.

Recommendation: Perform and document cumulative assessment of competencies. [I,E]

- Manufacturers want to hire employees who have mastered all the basic skills, and Nevada lacks a full-time (five days per week, eight hours per day) apprenticeship program that would last one year and provide the intensive training in the basics that employers value.

Recommendation: Assess the need for an accelerated daytime program. [P,I,E]

- The use of wire electrical discharge machines (wire EDM) in manufacturing has increased greatly, creating the need for machine tool technology graduates to acquire the skills to operate them.

Recommendation: Propose a grant to purchase a used wire EDM. [P,I,E]

- Although students express their desire to take machine tool classes in the summer, currently none are offered.

Recommendation: Offer machine tool classes during the summer. [E]

- Transportation issues present challenges to high school students wishing to attend WNC.

Recommendation: Recruit high school students from Douglas, Lyon and Washoe counties and continue to work with schools to solve transportation issues. [I]

- Some high school students have enrolled in machine tool technology classes as a way to make up for credit deficiencies even though they are not interested in machining for a living.

Recommendation: When recruiting from high schools, screen out students who are credit deficient and not seriously interested in the field. [P,I,E]

IV. Descriptive Statistics

A. Number of students with declared major in the program area:

| | | |
|---------|-----------|--------------------------------|
| 2009-10 | <u>16</u> | (does not include summer 2010) |
|---------|-----------|--------------------------------|

B. Number of graduates from the program for the following years:

| | | |
|---------|----------|---|
| 2007-08 | <u>0</u> | |
| 2008-09 | <u>2</u> | |
| 2009-10 | <u>0</u> | (partial data for spring 2010; no data for summer 2010) |

C. Headcount of students enrolled in any course related to the program (duplicated):

| | |
|-----------|------------|
| Fall 2009 | <u>136</u> |
|-----------|------------|

Summary of Existing Program Characteristics

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Review of Existing Programs 2009-2010
Summary of Characteristics

| Institution | Award Level | Program | # of Students with Declared Major 2009-10 | # of Graduates from Program | | | Service Headcount Fall 2009 |
|-------------|---------------------------|--|---|-----------------------------|---------|---------|-----------------------------|
| | | | | 2007-08 | 2008-09 | 2009-10 | |
| UNLV | M.A. | Criminal Justice | 803 | 188 | 174 | 186 | 1,831 |
| UNLV | B.A., M.A., M.F.A., Ph.D. | English | 392 | 91 | 103 | 85 | 8,096 |
| UNLV | B.A., B.S. M.S., Ph.D. | Environmental Studies Environmental Science | 88 | 14 | 8 | 19 | 634 |
| UNLV | B.S. M.Ed. | Health Education Health Promotion | 69 | 33 | 21 | 26 | 808 |
| UNLV | Ph.D. | Hospitality Administration | 20 | 21 | 14 | 25 | 53 |
| UNLV | B.S., M.S., Ph.D. | Physics (Computational & Applied) | 90 | 8 | 5 | 15 | 1,705 |
| UNLV | B.A., M.A. | Political Science | 470 | 111 | 101 | 84 | 2,920 |
| UNLV | B.S., M.Ed., M.S. | Workforce Education | 37 | 9 | 7 | 7 | 56 |
| UNR | B.S. | Animal Biotechnology* | 16 | 0 | 0 | 0 | 398 |
| UNR | B.S. | Animal Science* | 73 | 17 | 24 | 23 | 398 |
| UNR | M.S. | Animal Science* | 11 | 3 | 4 | 5 | 19 |
| UNR | M.S. | Biomedical Engineering | 13 | 1 | 0 | 0 | 57 |
| UNR | Ph.D. | Biomedical Engineering | 23 | 0 | 1 | 1 | 57 |
| UNR | M.S. | Chemical Engineering | 9 | 1 | 2 | 2 | 17 |
| UNR | Ph.D. | Chemical Engineering | 7 | 0 | 0 | 0 | 17 |
| UNR | M.S. | Civil Engineering | 48 | 17 | 12 | 16 | 211 |
| UNR | Ph.D. | Civil Engineering | 32 | 2 | 3 | 5 | 211 |
| UNR | M.S. | Computer Engineering | 39 | 6 | 2 | 0 | 129 |
| UNR | M.S. | Computer Science | 39 | 22 | 13 | 12 | 129 |
| UNR | Ph.D. | Computer Science & Engineering | 31 | 2 | 4 | 4 | 129 |
| UNR | M.S. | Electrical Engineering | 16 | 4 | 9 | 5 | 57 |
| UNR | Ph.D. | Electrical Engineering | 12 | 0 | 2 | 0 | 57 |
| UNR | M.S. | Materials Science & Engineering | 7 | 0 | 5 | 6 | 64 |
| UNR | Ph.D. | Materials Science & Engineering | 6 | 0 | 4 | 2 | 64 |
| UNR | M.S. | Mechanical Engineering | 25 | 14 | 8 | 13 | 120 |
| UNR | Ph.D. | Mechanical Engineering | 20 | 0 | 2 | 4 | 120 |
| UNR | B.S. | Nutrition | 203 | 24 | 39 | 37 | 831 |
| UNR | M.S. | Nutritional Sciences | 8 | 1 | 1 | 2 | 20 |
| UNR | B.S. | Pre-Veterinary Science | 102 | 1 | 0 | 1 | 398 |

| Institution | Award Level | Program | # of Students with Declared Major 2009-10 | # of Graduates from Program | | | Service Headcount Fall 2009 |
|-------------|----------------------------|---|---|-----------------------------|---------|---------|-----------------------------|
| | | | | 2007-08 | 2008-09 | 2009-10 | |
| NSC | No programs reviewed | | | | | | |
| CSN | A.A.S. | Air Conditioning Technology | 97 | 4 | 6 | 5 | 263 |
| CSN | Certificate of Achievement | Air Conditioning Technology | 97 | 3 | 3 | 7 | 263 |
| CSN | A.A.S. | Architectural Design Technology | 140 | 4 | 15 | 5 | 265 |
| CSN | Certificate of Achievement | Architectural Design Technology | 1 | 0 | 0 | 0 | 165 |
| CSN | A.A.S. | Automotive Technology | 294 | 14 | 14 | 11 | 647 |
| CSN | Certificate of Achievement | Automotive Technology | 87 | 2 | 5 | 7 | 771 |
| CSN | A.A.S. | Aviation Technology | 130 | 4 | 1 | 1 | 109 |
| CSN | A.A.S. | Building Technology | 296 | 11 | 22 | 18 | 625 |
| CSN | Certificate of Achievement | Building Technology | 47 | 1 | 6 | 9 | 625 |
| CSN | A.A.S. | CADD Technology | 94 | 7 | 13 | 5 | 115 |
| CSN | Certificate of Achievement | CADD Technology | 11 | 7 | 1 | 3 | 115 |
| CSN | A.A.S. | Computing and Information Technology | 538 | 20 | 32 | 33 | 3,387 |
| CSN | Certificate of Achievement | Computing and Information Technology | 135 | 15 | 7 | 5 | 1,208 |
| CSN | A.A.S. | Diesel Heavy Equipment Master Technician | 24 | 0 | 0 | 0 | 96 |
| CSN | Certificate of Achievement | Diesel Heavy Equipment Maintenance Technician | 4 | 0 | 0 | 0 | 96 |
| CSN | A.A.S. | Electronic Engineering Technology | 327 | 7 | 19 | 10 | 1,433 |
| CSN | Certificate of Achievement | Electronic Engineering Technology | 49 | 1 | 1 | 1 | 1,065 |
| CSN | A.A.S. | Environmental Safety and Health | 84 | 5 | 6 | 8 | 149 |
| CSN | Certificate of Achievement | Environmental Safety and Health | 33 | 3 | 1 | 5 | 149 |
| CSN | A.A.S. | Graphic Technology | 430 | 22 | 20 | 12 | 827 |
| CSN | Certificate of Achievement | Graphic Technology | 77 | 5 | 5 | 14 | 827 |
| CSN | A.A.S. | Mechanical Technology | 44 | 4 | 2 | 3 | 65 |
| CSN | Certificate of Achievement | Mechanical Technology | 41 | 0 | 1 | 3 | 65 |
| CSN | A.A.S. | Ornamental Horticulture | 53 | 4 | 6 | 6 | 215 |

| Institution | Award Level | Program | # of Students with Declared Major 2009-10 | # of Graduates from Program | | | Service Headcount Fall 2009 |
|-------------|----------------------------|--|---|-----------------------------|---------|---------|-----------------------------|
| | | | | 2007-08 | 2008-09 | 2009-10 | |
| CSN | Certificate of Achievement | Ornamental Horticulture | 17 | 2 | 3 | 0 | 215 |
| CSN | A.S. | Ornamental Horticulture/ Environmental Horticulture | 16 | 0 | 0 | 0 | 215 |
| CSN | A.A.S. | Photography | 345 | 13 | 13 | 21 | 1,051 |
| CSN | Certificate of Achievement | Photography | 101 | 4 | 3 | 4 | 1,051 |
| CSN | A.A.S. | Welding Technology | 56 | 1 | 0 | 1 | 216 |
| CSN | Certificate of Achievement | Welding Technology | 7 | 1 | 1 | 0 | 216 |
| GBC | No programs reviewed | | | | | | |
| TMCC | A.A.S. | Dental Assisting | 74 | 3 | 2 | 4 | 161 |
| TMCC | A.A. | Fine Arts | 161 | 3 | 4 | 4 | 1,091 |
| WNC | A.S. | Biological Sciences | 177 | 0 | 1 | 0 | 775 |
| WNC | A.A. | Criminal Justice | 149 | 9 | 14 | 6 | 409 |
| WNC | A.A.S. | Criminal Justice | 138 | 4 | 4 | 3 | 445 |
| WNC | A.A.S. | Criminal Justice - Law Enforcement Academy | 88 | 2 | 2 | 2 | 416 |
| WNC | Certificate of Achievement | Criminal Justice - Law Enforcement Academy | 18 | 0 | 0 | 0 | 87 |
| WNC | A.A.S. | Graphic Communications | 80 | 3 | 1 | 0 | 553 |
| WNC | Certificate of Achievement | Graphic Communications | 5 | 0 | 2 | 1 | 113 |
| WNC | A.A.S. | Machine Tool Technology | 44 | 2 | 1 | 3 | 202 |
| WNC | Certificate of Achievement | Machine Tool Technology | 16 | 0 | 2 | 0 | 136 |

* Program eliminated through curricular review process (June 2010).

Summary of Eliminated and New Programs 2009-2010 By Institution

| Institution | Award Level | Program | Elimination | New Program |
|-------------|--|---|-------------|-------------|
| UNLV | B.S. | Clinical Laboratory Sciences* | X | |
| UNLV | M.S. | Physical Therapy | X | |
| UNLV | D.N.P. | Nursing Practice | | X |
| UNLV | B.S. | Urban & Environmental Horticulture* | X | |
| UNR | B.S. | Agricultural & Applied Economics* | X | |
| UNR | B.S. | Animal Biotechnology* | X | |
| UNR | B.S., M.S. | Animal Science* | X | |
| UNR | Ed.D., Ed.S., Ph.D. | Counseling & Educational Psychology* | X | |
| UNR | post-baccalaureate, professional degree | Construction Engineering | X | |
| UNR | Ed.D., Ph.D. | Education Leadership* | X | |
| UNR | Ed.D., Ph.D. | Education Specialties* | X | |
| UNR | B.S. | Environmental & Resource Economics* | X | |
| UNR | B.A. | German | X | |
| UNR | B.A. | German Studies* | X | |
| UNR | B.S. | Interior Design* | X | |
| UNR | Ed.D., Ph.D. | Literacy Studies* | X | |
| UNR | D.N.P. | Nursing Practice | | X |
| UNR | M.S. | Resource & Applied Economics* | X | |
| UNR | Ed.D., Ph.D. | Special Education & Disability Studies* | X | |
| UNR | M.A. | Speech Communications* (program deactivation only) | X | |
| UNR | B.S. | Supply Chain Management* | X | |
| UNR | M.A. | Teaching English to Speakers of Other Languages* (program deactivation only) | X | |
| NSC | none | | | |
| CSN | Certificate of Achievement | Computer & Information Technology | X | |
| CSN | A.A.S. | Graphic Technology | X | |
| CSN | Certificate of Achievement | Graphic Technology | X | |
| GBC | none | | | |
| TMCC | A.A. | Applied Anthropology | X | |
| TMCC | A.A.S. | Civil Engineering Practitioner | | X |
| TMCC | A.A. | Elementary Education | X | |
| TMCC | A.A. | Secondary Education | X | |
| WNC | A.A.S. | Health Information Technology | X | |
| WNC | A.A.S. | Paralegal Studies | X | |

* Program eliminated through curricular review process (June 2010).