



Instructional Program Review Summary 2003-2004

Instructional Area: **Health Sciences**

Department: **Diagnostic Medical Imaging**

Discipline: **Radiology**

January 27, 2004

Instructional Program Review Summary

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NOTE: An external reviewer should not be required to refer to the documentation notebook to understand the Instructional Program Review

Summary. Rather, data should be clearly cited in the summary so that the reviewer can easily find the source documents if needed.

EXECUTIVE SUMMARY

Use the following guidelines to provide a concise overview/summary of the program review contained in this report.

Write a brief description of the goals and objectives of the discipline.

The Radiology Program faculty and its communities of interest review the program mission statement and goals yearly. The most recent review was in the Spring of 2003. The mission statement and goals are:

Mission Statement:

Consistent with the mission of Austin Community College, the faculty of the Diagnostic Medical Imaging Program is committed to providing quality instruction by preparing the graduate to be employable at an entry level in radiography and by providing students the opportunity to participate in advanced imaging modalities such as computerized tomography, magnetic resonance imaging, interventional radiology, Positron Emission Tomography, ultrasound, and radiation therapy.

Program Goals:

1. Upon completion of the program and employment, the graduate will satisfactorily demonstrate following entry level skills in radiography:

- a. clinical competency
- b. communication skills
- c. problem solving and critical thinking skills

2. Upon completion of the program, a minimum of 90% of the graduates will be successful on the national certification examination.

3. It is the goal of program to have 75% of admitted students complete the two year curriculum.

4. It is the goal of the program to have 85% of the graduates seeking employment in medical imaging, to be employed within six months.

Overview of how the program review was conducted. The radiology program faculty evaluate program effectiveness using several mechanisms. Internally, the program has participated in determining strengths, weaknesses, opportunities,

and threats which was facilitated by an OIE official. Also, because of programmatic accreditation requirements, the goals of the program must be reviewed yearly to determine the level of achievement of the stated goals. The program has developed an assessment plan which reviews the achievement of the program goals and is a requirement by the Joint Review Committee on Education in Radiologic Technology. This agency accredits the program based on compliance with Standards of Accreditation and the achievement of published program goals and outcomes. Earlier this year, the program submitted a four year interim report to the Joint Review Committee. In 1998, the program submitted a self study and participated in a site visit. As a result of the self study and site visit, the program was awarded the maximum award of accreditation which is for 8 years. Because we are half way through the period, we are required to submit a report that determines how well the program has been performing and the achievement of its stated goals. The program is still pending the results of the interim report. The results of this yearly assessment is shared with the Dean of Health Sciences, program advisory committee and other communities of interest. The Advisory committee members include representatives/officials from the program's clinical affiliates and a student representative from the class. It should be noted that the outcomes for the program goals have been achieved consistently for years.

Summary of findings:

Progress on previous program review recommendations. Progress on each of the recommendations is as follows:

Outcome #1: Clinical Competency, Communication Skills, and problem and critical thinking skills:

Progress: While the program is meeting its goals for this section, plans to improve the outcomes are in progress. A terminal competency evaluation system will be implemented with the class of 2005. Required student skills will be evaluated through simulation in the laboratory half way through the program and again at the end. This competency assessment process is in the initial planning stages.

Outcome #2: Communication Skills: See progress report for outcome #1. It should also be noted that based on data secured from employer surveys and clinical competency evaluations conducted by both faculty and clinical officials, it appears that communication skills are well within expected levels.

Outcome #3: Problem Solving and Critical thinking skills: See progress report for Outcome #1. This area is well within expected levels also. This is determined by clinical competency evaluations, professional development evaluations, and laboratory procedures evaluations.

Outcome #4: Success rate on National Credentialing Examination. The Program goal is that a minimum of 90% of graduates will be successful. From 1998-2003, the pass rate for graduates was 100%. For the graduating class of 2003, the pass rate was 90% . The students that were unsuccessful will be permitted to re-test.

Outcome #5: The published goal is to have 75% of admitted students complete the two year curriculum. The following is the retention rate. The required benchmark is 75% retention.

1998: 81%
1999: 84%
2000: 68%
2001: 81%
2002: 72%
2003: 81%

While the average retention rate since 1998 is 78%, progress has been made to strengthen the success rate of students. Better information about the program is available to potential students and the requirements of having each applicant complete the Anatomy and Physiology course plus college algebra appears to be helping retain students, although we will not know how well until we have at least two complete program cycles have gone through the program using the stated pre-requisites. Other improvements are being made to program website also to help educate applicants regarding the nature of the program and profession.

Program strengths.:Based on the assessment of program goals and outcomes since the last Instructional Program Review, it appears that the attainment of the goals has been possible because of the dedication of program faculty, students, and the support of the program clinical affiliates and the administration of the college. Specific strengths will be identified later in this document.

Areas for improvement. While the program is meeting all its goals, it is important that to ensure that the goals be continuously be monitored and improved. The following areas will be emphasized for each of the goals:

Goal #1: Entry level skills for graduates in competency, communication skills, and problem solving/critical thinking skills.

The faculty are in the process of revising the clinical competency system . In addition to the successful methods of evaluation that is used now, we will be implementing comprehensive clinical competency evaluation procedures that will assess student skills half way through the program as well as a terminal clinical competency evaluation. These new procedures will be conducted in the new program lab facilities. Another factor that will also enhance student competencies will be the acquisition of a Computed Radiography System. This system will enhance the current lab equipment and will ensure that the students education experience will include the latest in imaging technology. This will facilitate the transition of our graduates from the educational environment to the workplace. Because this represents a very significant technological advancement, we will include this as a top priority in program improvements for the future. This will be identified in the Quality Improvement Plan Form . Communication skills are addressed in these evaluation procedures also, however other mechanisms will be used as well such as research papers and the completion of a public speaking course requirement in the degree plan.

Goal #2: 90% success rate of graduates in national credentialing examination.

Key Planning Issue: The program has been very successful over the years in the success rate of graduates on the credentialing examination, however, there will be some strengthening of curriculum areas that have been identified by the credentialing exam results summary as areas which could use improvement.

Goal #3. To have 75% of admitted students finish the program.

Key Planning Issue: The overall average of program completion rate for the past six years is 78% which is slightly better than the program goal of 75%. There are two strategies that program officials feel will be helpful in retention of students: Better Program Information for program applicants will be made available on the web site as well as in the general program information session which is required as part of the admissions procedure. Additionally, the program now requires Anatomy and Physiology and College Algebra as pre-requisites and it is felt that this will help better prepare applicants to the program.

Goal #4: To have 85% of the graduates seeking employment to be employed within six months of graduations.

Key Planning Issue: Based on current employment trends in the local medical community as well as state and nation wide, it appears that there will be positions available for the graduates when they finish the program. The program will consult with the Advisory Committee Members to determine the numbers of positions that are available when the program graduates each class (August).

Key planning issues. Program faculty welcome recruitment materials and visits by local and out of district employers. While the majority of the graduates secure jobs immediately after graduation or just prior, it is felt that inviting or scheduling employer visits to the campus will ensure the best possibility that graduates that want jobs immediately, will secure them. Generally, the program has at least three visits per year from potential employers.

Conclusions: What are the major conclusions regarding the present state of the program?

The Program is meeting community needs and preparing the graduates for entry level work in general radiology. Availability of other imaging modalities training such as Interventional Radiology, Computed Tomography, and Magnetic Resonance Imaging are also crucial to the local medical community. Training in Nuclear Medicine Technology is not available in the local area and is a modality that is in great demand locally as well as across the country. This represents part of program's master plan and will also be included as a second priority in the Program Quality Plan.

Recommend future directions for the program based on this review:

- Expand services
- Maintain services
- Reduce services
- Close program

Recommendations: Summarize the self-study's recommended actions for improving the quality of the program.

The following items represent the recommended actions for improving the quality of the program:

1. Implement Comprehensive Clinical Competency Evaluation System.
2. Acquire Additional Radiologic Equipment (Computed Radiography System Components: Reader and Cassettes) to better prepare graduates to enter the profession when they graduate.
3. Development and implementation of a Nuclear Medicine Tehcnology Program.
4. Revise areas in curriculum to strengthen identified areas of weakness in credentialing exam results summary.
5. Continue to offer special imaging modality programs such as cardiovascular-interventional radiology, computed tomography, and magnetic resonance imaging.

SELF-STUDY TEAM PARTICIPANTS

List the names of people who participated in the review and their association with your program.

Name **Paul Dubiel** ACC Faculty Industry Representative
Student

Name **David Erickson** ACC Faculty Industry Representative
 Student

Name **Rudy Garza** ACC Faculty Industry Representative
Student

Name **Steve Smith** ACC Faculty Industry Representative
Student

Name **Justin Maxwell** ACC Faculty Industry Representative
 Student

Name **Mary Wagner** ACC Faculty Industry Representative
 Student

Name **Karla Eaton** ACC Faculty Industry Representative
Student

Name **Margaret Bishop** ACC Faculty Industry Representative
 Student

PROGRAM DESCRIPTION

Provide a brief description of the overall history, major developments and current objectives for your program (limit to 500 words).

The Radiology Program at Austin Community College has been in existence since 1975. Major developments include the gradual increase in program capacity as well as moving to the new Health Sciences Building at the EastView Campus. In the early years, student numbers were limited to 15-20 students and now the capacity is 45. Advanced Imaging Modality training in CT, MRI, and Cardiovascular Interventional Radiology has been added to the program. The program mission is:

Consistent with the mission of ACC, the faculty of Radiology Program is committed to providing quality instruction by preparing the graduate to be employable at an entry level in general radiography and to be successful on the national credentialing examination in radiography and by providing students the opportunity to participate in advanced imaging modalities such as Computed

Tomography, Magnetic Resonance Imaging, Cardiovascular interventional radiology, ultrasound, nuclear medicine, and radiation therapy.

STRENGTHS, WEAKNESSES, OPPORTUNITIES, THREATS (SWOT)

List the names of people who participated in the SWOT and their association with your program.

- Name **Paul Dubiel** ACC Faculty Industry Representative
 Student
- Name **David Erickson** ACC Faculty Industry Representative
 Student
- Name **Steve Smith** ACC Faculty Industry Representative
 Student
- Name **Margaret Bishop** ACC Faculty Industry Representative
 Student
- Name **Mary Wagner** ACC Faculty Industry Representative
 Student
- Name **Justin Maxwell** ACC Faculty Industry Representative
 Student
- Name **Karla Eaton** ACC Faculty Industry Representative
 Student

Summarize the findings of the SWOT analysis. Focus on the top 5 or 6 issues and answer the following questions:

Strengths: In what does your program excel?

Program strengths that were identified are as follows:

Outcomes: High pass rate on credentialing exam, excellent work placement record, graduate employment success based on input from clinical officials.

Program faculty: Knowledgeable experienced faculty, Highly motivated and interested adjunct and clinical faculty, diverse credentialing of faculty.

Community Support: Excellent rapport with clinical facilities where students train., excellent clinical affiliate resources, good response to community requests and needs such as development of new imaging programs in CT, MRI, and Cardiovascular-interventional radiology.

Availability of Advanced Imaging Modality Programs: Advanced training in Computerized Tomography, Magnetic Resonance Imaging, and Cardiovascular-interventional radiology is available at Austin Community college.

Physical Resources: The program has moved to the new Health Sciences building at EVC and has three labs with excellent radiologic equipment.

Weaknesses: What are the aspects of your program, which, if not addressed, will impede the area's future?

Identified Program Weaknesses:

Faculty Shortage. Critical shortage with clinical supervision by program faculty as well as classroom instruction. Inadequate coverage of clinical facilities by program faculty.

Computer Needs: Need for updated computer hardware, updated video resources such as films, cd's, etc. Need to develop online instruction opportunities, Need for new instructional software.

Curriculum Development:

Lack of time for curriculum development/improvements. Lack of funding for professional development, in-district travel.

Marketing: Not enough marketing support from ACC. Need to improve this.

Opportunities: What factors does your program need to take advantage of in order to enhance the quality of the area?

Opportunities for of the Program include:

Program expansion: Develop new programs such as Nuclear medicine Technology, promote and develop existing programs.

Physical Resources: Health Sciences library expansion in radiology offerings is recommended, acquire computed radiography equipment/cassettes.

Clinical Affiliates: Expand the number of clinical sites where students train.

Marketing and Recruitment: Develop better marketing strategies for general program but especially for smaller advanced imaging modality programs.

Higher Education Affiliates: Collaborate with other radiology programs to increase enrollments in all imaging programs

Distance Learning: Develop distance education for selected classes.

Threats: What are the external factors that could negatively impact your program's future?

The following factors were identified as threats:

Job Market Issues: Changing regulations expanding the numbers of non-registered individuals taking x-rays, utilizing temporary employment agency technologists by clinical facilities, new radiology facilities utilizing untrained workers to take x-rays.

ACC Issues: College accreditation difficulties have been prominent in the local media, no support from ACC administration to hire additional faculty.

Competition: Other imaging training programs that have entered the local medical community will lead to more competition for clinical placements for students. This may effect the number of students that the ACC radiology program can accept and train.. Other imaging modality programs may be started by a proprietary agency if ACC does not.

Economy: Spiraling health care costs, reduced funding by the state co-board affect the program and what it can do to improve.

Discuss changes from the program's previous SWOT analysis.

Changes/differences (when indicated) from the previous SWOT analysis are summarized below:

Strengths: There were no major differences re: employment trends and credentialing of graduates. A major difference and new strength are the program facilities.

Weaknesses: There are two general weaknesses that have not improved since the previous SWOT. These are: lack of faculty, both clinical and classroom and the lack of funding for professional development.

Opportunities: The opportunities essentially remain the same

Threats: The previous SWOT noted issues regarding inadequate space, dated radiologic equipment, increased workload for faculty, and lack of competitive salaries for potential new faculty. The space and equipment concerns have been effectively eliminated with the new facilities, however availability of new faculty continues to be a concern. New threats focus on job market issues such as untrained workers employed in some clinical facilities, utilizing temporary agency technologists to replace permanent staff and ACC issues such as bad publicity and accreditation issues related to Board of Trustees actions.

ANALYSIS

[a] Relevance of the program to College mission and desired ends

Mission:

Review the program's purpose statement. Verify that the statement is current and accurate and reflects the mission of the college as a whole or update the purpose statement.

The Self-Study team reviewed the program purpose statement and found (select one):

The purpose statement is current, accurate, and reflects the mission of the college.

The purpose statement was revised as shown below:

Desired Ends (Board Policy A-2. Intended Outcomes)

How well does the program support the intended outcomes of the college by providing "service-area adults with the postsecondary and higher education they need and can use for productive useful lives?"

The program is in compliance with this intended outcome. The opportunity for any adult to enter the program is available and consistent with the program admissions procedures.

In what ways does the program demonstrate an open, responsible exchange of ideas?

The Program faculty feels that a good exchange of ideas and communication takes place between the community we serve and program officials. This is accomplished by working with officials from the clinical affiliates of the program and student input with the self study process for both the Instructional Program Review Process required by ACC and the programmatic accreditation process required by the Joint Review Committee on Education in Radiologic Technology.

In what ways does the program provide an open door to educational potential?

This is accomplished by the development and implementation of advanced imaging modalities training programs. It is also vital that the program listen to the needs of the community as identified by the Program Advisory Committee.

In what ways does the program take targeted action to address internal needs within available resources?

Program faculty are dedicated individuals that will work to ensure that student needs are met. While the resources are very limited with regard to clinical faculty, the basic needs are being met for now. However, it should be noted

that it will be extremely difficult to continue to improve or expand any programs with the limited resources. In many cases, program faculty go above and beyond what is required to ensure student success and supervision by utilization of their own resources. (traveling to clinical sites in their vehicles and not being reimbursed for in-district travel).

In what ways does the program demonstrate a commitment to integrity and exemplary standards?

The program faculty and clinical facilities work very hard to ensure that students are provided the best possible environment for training. Clinical officials volunteer their time and resources to work with ACC students and program faculty to ensure that the student's needs are met. This has resulted in the success that has been described earlier in this document. It is felt that through the efforts of clinical officials and faculty and by open communication with our communities of interest, a high degree of integrity is documented.

In what ways does the program demonstrate personal and professional ownership that generates accountability?

The longevity of faculty in the program and the long term excellent relationship between the clinical agencies and ACC documents accountability by program and clinical officials. It is through the hard work of these individuals and clinical facilities that makes the successful outcomes possible.

[b] Responsiveness to community needs and satisfaction of community demand

In what ways does the program address a verifiable need for the student, community, and society?

There continues to be a strong local, state, and national need for medical imaging professionals. Program officials monitor the satisfaction of both the medical community and students through a variety of mechanisms which include surveys to employers and students and evaluating employment trends and needs.

Describe the results of the program's most recent assessment of community need.

The community need for this program is documented by the employment history of the graduates and the state of the profession. The program continues to provide well trained Radiologic Technologists to serve in the medical community in private imaging clinics as well as in all the hospitals in the area. It is important to also note that the majority of the graduates have jobs lined up well before they graduate.

How do the program's five-year enrollment trends compare with those of the College overall?

Based on the supplemental data provided by the Office of Institutional Effectiveness, analysis of the enrollments indicates a modest growth in enrollments with each new admitted class. This appears to be consistent with the growth of the college in general. With the new facilities at the Eastview Campus, there is definitely an increase in enrollments due to increased capacity.

[c] Accessibility to students and identification of unnecessary barriers

Analyze when and where courses are offered (by campus, time of day, mode of delivery).

Because of the nature of the program, and the lab facilities it can only be offered at the EVC

List the number of sections taught (by location).

The number of sections depends on the semester, when all sections are filled (including advanced Imaging Modalities), these are the numbers by semester:

Fall: 20

Spring: 17

Summer: 5

List the number of sections closed or canceled per course.

None, unless there are insufficient students in certain lab sections.

How does each of the five-year demographic trends (gender, ethnicity, age group) for this program compare to the overall college trend? (List the source of your information.)

The demographic trends compare favorably. Information obtained from OIE.

Identify any unnecessary barriers to students, especially those who are educationally disadvantaged and not well served by other colleges.

No barriers are identified.

[d] Student outcomes including participation and successful-completion rates

How do course completion rates (A-B-C-D rates) for courses within this program compare to College norms?

Based on the data provided by the Office of Institutional Effectiveness, the course completions rates with A's, B's, and C's for the program students and ACC in general are as follows:

ACC in General: 31% failure/non pass of course and 69% Pass Rates

Radiology Students: 8% failure/non pass of courses and 92% pass rates
:

What are the program completion or graduation rates (compared to intent as well as overall) for this program?

The overall average graduation rate is approximately 78%.

How do withdrawal rates for courses compare to College norms?

Better than most typical academic support courses.

What do the results of the program's student learning outcomes assessments (departmental final exams, exit tests, standardized tests, etc.) indicate about the program?

Based on the assessment of data obtained from graduation rates, credentialing exams, comprehensive final exams, and survey results, the program is exceeding the published program goals.

[e] Measures of program quality and educational value added

- **Academic Standards**

What are the processes and procedures that the department uses to maintain academic standards and achieve consistency within the department?

The program has developed a radiology student handbook which identifies all program policies, procedures, and academic standards. SCANS are also incorporated into the curriculum courses to ensure compliance with that requirement. Standard Syllabi are also provided for each individual course in the program that identifies grading criteria, etc.

- **Curriculum**

What procedures are used to assure that the curriculum is current and adequately meets the needs of students?

Because of Programmatic accreditation requirements, the professional curriculum developed by the American Society of Radiologic Technologists is utilized. SACS requirements as well as Co-Board requirements are also in place for the curriculum. It should also be noted the Texas Higher Education Coordinating Board also has standardized courses published in the WECM which all programs must follow. The WECM courses are based on the professional curriculum developed by the American Society of Radiologic Technologists.

Are learning outcomes defined for courses and the program? Yes No

Are course texts up-to-date?. Yes No

Are course and program listings in the ACC Catalog up-to-date? Yes No

Do all courses have up-to-date syllabi on file? Yes No

Evaluate the use of instructional resources (including those in the library).

Program faculty utilize all standard classroom technology including computer resources and LRS holdings.

Evaluate the extent to which technology impacts the mode of instruction, including the number of courses and sections taught via distance learning. The program does not offer any distance learning courses at this time.

Evaluate the extent to which instruction is focused on problem solving, active learning, and work-based elements.

All of the program courses are competency based which requires problem solving and critical thinking skills. This is particularly true in the clinical education component of the program.

List below the current discipline-specific courses within the program and the date of the latest review.

Course

Part of the Program Assessment Plan requires that course content be evaluated when reviewing the attainment of program goals. This is done on a yearly basis and is a general overview of the program curriculum. This is done to ensure that program goals are being achieved. If it appears that a specific goal is not being accomplished, then limited revisions or changes in the appropriate course(s) may be indicated. It should be noted the radiology program follows the Texas Higher Education Coordinating Board Radiology (WECM) curriculum for radiology programs. The courses are all based on the recommended curriculum by the American Society of Radiologic Technologists, however in order to be consistent across the state, all Radiology programs use the same courses and they are reviewed on a yearly basis by WECM. The program also participates in a self study process for the Joint Review Committee on Education in Radiologic Technology. As part of that process, the curriculum is reviewed to ensure that all requirements are being addressed. The program recently submitted an Interim Report to the Joint Review Committee on Education in Radiologic Technology in the Spring, 2003. We have not yet received the results of that report. The WECM courses for the program are:

RADR 1317- Radiographic Anatomy and Physiology
RADR 1309- Introduction to Radiology and Patient Care
RADR 1411- Basic Radiographic Procedures
RADR 1213- Principles of Radiographic Imaging I

RADR 2431- Advanced Radiographic Procedures
RADR 2209- Radiographic Equipment
RADR 2205-Principles of Radiographic Imaging II
RADR 1360- Clinical/medical Radiologic Technology I

RADR 1273- Introduction to Sectional Anatomy
RADR 2213-Radiation Biology and Protection

RADR 1361- Clinical/Medical Radiologic technology II

RADR 2217- Radiographic Pathology
RADR 2274- Advanced Technical Principles
RADR 2460 - Clinical/Medical Rad. Tech. III

RADR 2233- Advanced Medical Imaging
RADR 2461- Clinical/Medical Radiologic Technology IV

RADR 2335- Radiologic Technology Seminar
RADR 2362- Clinical/medical Radiologic Technology V

Course	Date of Last Review
Course	Date of Last Review
Course	Date of Last Review
Course	Date of Last Review
Course	Date of Last Review

• **Faculty**

Do all faculty teaching in the program meet SACS requirements?

Yes No (if no, please explain)

What is the ethnic diversity of the faculty?

The diversity of the program faculty is as follows:

- 1 hispanic male
- 1 black female
- 2 anglo females
- 1 anglo male

What evidence is there that faculty are staying current in their respective disciplines and instructional methodologies?

Each faculty member is required to maintain a file documenting evidence of continuing education. This is required to maintain professional credentials.

What recognition has been given to faculty within the last year?

Margaret Bishop was recognized for 20 years service.

Describe professional development activities in which program faculty participate.

Program faculty participate in professional development activities provided by ACC as well as attending professional radiology conferences locally, state professional society, and national society conferences

What percent (and the total number) of faculty participate in formal professional development activities on a regular basis?

100%

Describe the types of discipline-related professional development activities offered.

Typical Professional Development Activities may include:

Radiation biology and Protection
Trends in Radiology Education
Radiology Equipment
Pathology Lectures
Forensic Radiology

What percent of sections do full-time faculty teach?

100%

What percent of contact hours do full-time faculty teach?

15 LEH with frequent overloads due to faculty shortage.

Are student evaluations of instruction within acceptable range? Yes No

To what extent are alternative modes of instruction incorporated into classes?

Program instruction is currently general lecture/lab and utilizes the usual AV equipment available in a typical ACC classroom. We do not utilize distance learning at this time.

- **Student Satisfaction**

Do student course evaluations demonstrate satisfaction with courses?

Yes No

[f] Adequacy of program resources and efficiency of resource use

Describe the overall adequacy of resources (human, technological and capitol, facilities, and fiscal) available to the program for providing effective program delivery and outcomes.

At the present time, the number of program faculty is inadequate. While the labs now contain excellent up to date equipment, some additions are still needed to bring the program completely up to date with the latest imaging technologies. There is inadequate funding for professional development activities for faculty.

What is the ratio of full-time to adjunct faculty (by course and for the program overall)?

The program utilizes 2 adjunct faculty members to teach in the advanced imaging modality courses (Computerized Tomography and Magnetic Resonance Imaging Programs). There are no adjuncts in the general radiology program.

How up-to-date is the equipment used by the program? Up to date with some improvements necessary to ensure that our students are well prepared.

Identify possibilities for improving the efficiency of the program's use of resources.

1. Professional Development: Perhaps find an alternate sources of funding for this important requirement, i.e. grants?

2. While current physical resources in the labs are adequate, there will need to be enhancements made to improve the preparation of the graduates. Specifically, computed radiography and nuclear medicine should be added.

3. There are some common resources that can be incorporated to increase the efficiency of the use of these resources. This includes utilization of other health sciences program computer labs for some activities. The program also participates in making presentations to other health sciences programs. Other health sciences programs also teach some of the program requirements such as teaching vital signs by the Nursing Programs, and Surgical Technology teaching our students Aseptic Technique.

[g] Comparison of program performance, price, and enrollment with that of alternate local suppliers

How is the program competitive with similar programs offered by other institutions or schools in the service area in terms of performance, cost to students, and enrollments?

There are no other radiology programs in the Austin area that are accredited. There is one limited license program (proprietary limited program) that trains individuals to do limited studies however, those individuals are not eligible to work in full service radiology facilities nor in hospitals. They generally are employed by small private physician offices. The cost of training for a proprietary program such as the one described here is approximately \$11,000.00.

Other college programs in the Waco, Bryan, and San Antonio areas are accredited like ACC's program, and in general, their cost is less than it is at ACC. Those programs do not serve the Austin area however.

[h] Direct and indirect program-related revenues and costs to the College

Identify the major sources of revenue for the program, including grants, partnerships, etc.

Tuition, Texas Higher Education Coordinating Board

Compare program costs to those of other ACC programs.

The cost is consistent with other health sciences programs.

Compare the program's actual expenditures to the approved program budget for the previous two years.

The program stays within the allocated budget.

TRANSFER or WORKFORCE AREA-SPECIFIC INFORMATION

Only Workforce Programs complete the items below.

Report/status from latest external accrediting agency visit

The Radiology program was last visited in April of 1998. The results of that accreditation site visit was a full 8 years of accreditation. It should be noted that half way through the accreditation period, the program is required to submit an interim report to the accreditation agency and the program submitted that last June. We have not yet heard the results of the report and its impact on the remaining period of accreditation which runs through 2006.

When was the most recent program revision?

The Program revised the general academic requirements by adding Algebra in 2000 and by making some required changes to a summer course in 2001 (RADR 1273-Sectional Anatomy for Medical Imaging was added to the curriculum). The program also implemented revised clinical competency requirements.

Number of declared majors intending to complete a program who complete degree/certificate requirements within 6 years

Based on recent statistics and the retention rate of students in the program, approximately 78% of admitted students complete their degree requirements within two years and not six.

Average number of semesters it takes for students to gain degree/credential.

Six semesters

Number of graduates within the last three years

78

Demographics of graduates

Males: 19: Anglo(7), Hisp(8), Blk(3), Other (1)

Females: 61 Anglo(48), Hisp(9), Blk (2)Other (2)

Percent of graduates who are employed within one year of graduation.

100%

What evidence exists that program completers (or near completers) are successful on the job? What, if available, are their beginning salaries?
Employer Surveys that the Program conducts. Typical Salaries range from \$18.75 - \$22.50 entry level

Percent of employers indicating satisfaction with graduates.
100%

Discuss the most recent results of Focus Group or internal survey of employers. The most recent surveys were done in 2002 for the grads of 2001. It is program policy to wait 6 months to a year after graduation before employer surveys are done. This is to ensure that the employers have had sufficient time to evaluate the graduate's performance. Program goals require a minimum of satisfactory performance by graduates. Employers have rated the graduates as better than average for technical skills in clinical performance. The data also indicates that graduate communication skills are meeting or exceeding the established program goals.

Number of employers indicating need for more graduates
100%

Provide evidence of SCANS competency integration into course syllabi and programs.
Please review radiology student handbook on line and see page 14 for evidence of scans incorporation into program courses. Website address is:
<http://www.austincc.edu/hltsci/rad>

How often does the program's advisory committee meet to discuss curriculum issues?
Annually

When and where are advisory committee minutes maintained and posted?
ACC web

Evidence of recent review of curriculum by external advisory committee.
Advisory committee reviews program goals yearly and if curriculum changes/revisions are necessary they are discussed at this time. Curriculum discussion documentation available with Advisory Committee Meeting minutes, for Fall 2003 meeting.

Advisory committee validation of entry level skills
Entry level skills are assessed by Clinical officials that are also on the Advisory Committee. Advisory Committee members complete the surveys annually.

Only Transfer Programs complete the items below.

Number and percent of graduates who transfer within one year of graduation.

1 in last 3 years

Number of articulation agreements with universities and colleges

1 Midwestern State University in Wichita Falls, Texas

Number of courses that transfer

Please note that the radiology courses will transfer to other community colleges that have radiology programs and to other universities that also have radiology programs. They may be accepted as electives at some institutions that have health sciences education or health care management degrees but not necessarily radiologic sciences.

Number of student complaints about problems with course transfer

No complaints have been submitted

Discuss the results of the most recent Survey/focus group of transfer institutions.

None conducted

Discuss data from transfer institutions if available.

None available.

Number of students transferring successfully.

One 2003 graduate transferred and is successfully completing courses at Midwestern State University.

CONCLUSIONS

Based on the information collected and analyzed during the program review process, what are the major conclusions of this review of the program?

Summarize them here and complete the *Program Status* form.

Pursuant to the information collected and reviewed, it appears that the program is performing well and is contributing significantly to the Medical Imaging Needs of the Austin Community College service area. There are some weaknesses that need to be addressed such as lack of funding for faculty professional development, shortage of faculty both clinical and didactic, acquiring computed radiography equipment to ensure adequate preparation of the graduates, and the development of a new Nuclear Medicine Technology Program to address a critical shortage of practitioners for that imaging discipline.

PROGRAM VISION STATEMENT

State the program's vision or preferred future for the next five years. The vision statement should provide direction to the program as it makes improvements to enhance its effectiveness and efficiency.

The program vision should reflect modest growth in enrollments in the program. This is limited by the space available in the clinical facilities as well as in the classroom and lab facilities. Growth will be possible if the resources are made available both clinically and in human resources. The community expects that the program continue providing highly qualified radiographers and also initiate additional training in other imaging modalities such as Nuclear Medicine Technology also. As Medical Imaging technology changes, the program must also keep pace with the new technology to ensure that the graduates are well qualified and competitive with other program graduates.

RECOMMENDATIONS

What does the self-study team recommend for improving or maintaining the quality of the program? Summarize them here and complete the *Quality Improvement Plan* form.

Program improvements include the addition of Computed Radiography and a Nuclear Medicine Program. Other areas that will not require funding include the implementation of a Comprehensive Clinical Competency System to ensure that the students achieve competency and show progression in their skills. We should also continue to offer advanced imaging modality disciplines such as cardiovascular interventional radiology, computed Tomography, Magnetic Resonance Imaging, and Mammography.

ADDITIONAL COMMENTS



APPENDIX

List all documents that you used in your report:

The following documents were used in the development of this report:

1. Instructional Program Review Documents
2. Previous SWOT document. 2000
3. Current SWOT document: 2003
4. Interim Report to Accrediting Agency: Joint Review Committee on Education in Radiologic Technology.

When you have completed this report, send it via e-mail to the Coordinator for Institutional Assessment (rwall@austincc.edu) as an attachment.

Quality Improvement Plan Form for Diagnostic Medical Imaging (Radiology) Program

To be useful, a plan must be based on distinct, measurable tasks or actions that strengthen the program. An action plan is not philosophical or abstract. It can and should include some “what ifs.” “If this equipment is purchased,” “If space is added,” or “If schedules are changed,” are examples.

The template below is intended to assist you in thinking and planning long-term. The College knows that factors can and do change so that some of these projected tasks may not occur—especially those projected for the third year. Furthermore, we know that this plan will need to be revised. Therefore, in one year, OIE will be asking you to update both your progress towards these tasks and to review/revise your tasks for the second and third year of the plan.

Note on Requests for Funds : Consider changes that require **one-time** costs (equipment, renovation, etc.) and changes that require **recurring** costs (typically new positions). *All requests for funding should indicate how they will improve learning and meet targeted objectives.*

2004-05				
Goal:#1: Secure a Computed Radiography Reader with Laser Printer and Image Receptors (Cassettes)				
Estimated completion date:September 1, 2004				
Task or Action	Expected Outcome/ Measure of Success	Estimated Cost(s) with Justification	Consequence if Not Funded	Who is Responsible
Install Unit In Program Lab Facilities	This will prepare students to enter general radiology facilities in area hospitals and medical imaging clinics. Majority of facilities have this technology	Refurbished Image Receptor Reader with cassettes: \$60,000.00 Sony Laser Printer: \$38,000.00	Without this unit, it will be more difficult to prepare students to enter the workforce in radiology in the coming years. This is the new technology that is becoming the standard in most medical imaging departments.	Rudy L. Garza, M.S.,R.T.R Department Chair, Radiology

Goal:

#2: Develop and Implement a Nuclear Medicine Technology Program

Estimated completion date: Fall, 2005

Task or Action	Expected Outcome/ Measure of Success	Estimated Cost(s) with Justification	Consequence if Not Funded	Who is Responsible
Develop Program in Nuclear Medicine Technology	Anticipate graduation of well trained nuclear medicine technologists for this medical community and the general region.	There is a critical shortage of this type of imaging professionals across the entire country.. Anticipated costs are: \$50,000 . Faculty \$90,000.00 Nuclear Medicine Equipment.	It is anticipated that a continued shortage of well trained workers in this imaging discipline will cause significant difficulties in quality patient care and availability qualified practitioners..	Rudy L. Garza, M.S.,R.T.R. Dept Chair, Radiology

Goal,;

Estimated completion date:

Task or Action	Expected Outcome/ Measure of Success	Estimated Cost(s) with Justification	Consequence if Not Funded	Who is Responsible

Goal:

Estimated completion date:

Task or Action	Expected Outcome/ Measure of Success	Estimated Cost(s) with Justification	Consequence if Not Funded	Who is Responsible

2005-06

Goal:				
Estimated completion date:				
Task or Action	Expected Outcome/ Measure of Success	Estimated Cost(s) with Justification	Consequence if Not Funded	Who is Responsible

Goal:				
Estimated completion date:				
Task or Action	Expected Outcome/ Measure of Success	Estimated Cost(s) with Justification	Consequence if Not Funded	Who is Responsible

Goal:				
Estimated completion date:				
Task or Action	Expected Outcome/ Measure of Success	Estimated Cost(s) with Justification	Consequence if Not Funded	Who is Responsible

Goal:				
Estimated completion date:				
Task or Action	Expected Outcome/ Measure of Success	Estimated Cost(s) with Justification	Consequence if Not Funded	Who is Responsible

2006-07				
Goal:				
Estimated completion date:				
Task or Action	Expected Outcome/ Measure of Success	Estimated Cost(s) with Justification	Consequence if Not Funded	Who is Responsible

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Goal: [REDACTED]				
Estimated completion date: [REDACTED]				
Task or Action	Expected Outcome/ Measure of Success	Estimated Cost(s) with Justification	Consequence if Not Funded	Who is Responsible

Goal:				
Estimated completion date:				
Task or Action	Expected Outcome/ Measure of Success	Estimated Cost(s) with Justification	Consequence if Not Funded	Who is Responsible

Goal:				
Estimated completion date:				
Task or Action	Expected Outcome/ Measure of Success	Estimated Cost(s) with Justification	Consequence if Not Funded	Who is Responsible