

# Board of Trustees

## Education and Workforce Development Committee Meeting

Tuesday, December 04, 2018

3:30 p.m.

Ann Richards Administration  
Building, Board Room  
Pecan Campus  
McAllen, Texas



*In the Making!*

Online Copy

**South Texas College  
Board of Trustees  
Education and Workforce Development Committee  
Ann Richards Administration Building, Board Room  
Pecan Campus, McAllen, Texas  
Tuesday, December 4, 2018 @ 3:30 p.m.**

**AGENDA**

“At anytime during the course of this meeting, the Board of Trustees may retire to Executive Session under Texas Government Code 551.071(2) to confer with its legal counsel on any subject matter on this agenda in which the duty of the attorney to the Board of Trustees under the Texas Disciplinary Rules of Professional Conduct of the State Bar of Texas clearly conflicts with Chapter 551 of the Texas Government Code. Further, at anytime during the course of this meeting, the Board of Trustees may retire to Executive Session to deliberate on any subject slated for discussion at this meeting, as may be permitted under one or more of the exceptions to the Open Meetings Act set forth in Title 5, Subtitle A, Chapter 551, Subchapter D of the Texas Government Code.”

- I. Approval of Minutes for Tuesday, November 6, 2018 Committee Meeting ..... 3 – 9
- II. Review and Recommend Approval of the Diagnostic Medical Sonography Associate of Applied Science Program ..... 10 - 43

## **Approval of Minutes for Tuesday, November 6, 2018 Committee Meeting**

The Minutes for the Education and Workforce Development Committee meeting of Tuesday, November 6, 2018 are presented for Committee approval.

**South Texas College  
Board of Trustees  
Education and Workforce Development Committee  
Ann Richards Administration Building, Board Room  
Pecan Campus, McAllen, Texas  
Tuesday, November 6, 2018 @ 3:30 p.m.**

**MINUTES**

The Education and Workforce Development Committee Meeting was held on Tuesday, November 6, 2018 in the Ann Richards Administration Building Board Room at the Pecan Campus in McAllen, Texas. The meeting commenced at 3:30 p.m. with Mr. Gary Gurwitz

Members present: Mr. Gary Gurwitz

Other Trustees present: None

Members absent: Dr. Alejo Salinas, Jr. and Mrs. Victoria Cantú

Also present: Dr. Shirley A. Reed, Mr. Matthew Hebbard, Dr. David Plummer, Dr. Fernando Chapa, Dr. Brett Millan, Ms. Yvette Gonzalez, and Mr. Andrew Fish.

**Approval of Minutes for Tuesday, October 9, 2018 Committee Meeting**

Mr. Gary Gurwitz approved the Minutes for the Education and Workforce Development Committee meeting of Tuesday, October 9, 2018 as written.

**Review and Recommend Action on Proposed Revisions to Policy  
#3232: *Dual Credit Student Eligibility Requirements***

Mr. Matthew Hebbard, Vice President for Student Affairs and Enrollment Management, reviewed the proposed revisions to Policy #3232: *Dual Credit Student Eligibility Requirements*.

**Purpose** – The proposed policy revisions were necessary to further improve the success of dual credit students by limiting “self-enrollment” in regular (non-S) sections, to ensure students receive academic advising and prior approval.

A combination of policy revisions and tuition and fee schedule revisions had been implemented to help partnering districts and the College guide students toward successful completion of their dual credit courses and programs, and to help prevent students from

accumulating a poor performance record that will negatively impact their higher education opportunities.

The Board previously approved policy revisions that:

- Limited students to enrollment in courses within their declared major and degree plan
- Limited students to up to 68 attempted credit hours, or completion of an associate degree

**Justification** - The revision adhered with the SACSCOC Dual Credit Policy and the National Alliance of Concurrent Enrollment Partnership Accreditation Standards. In addition, revisions to the policy were necessary for the following reasons:

- The number of courses students may enroll in is not clearly defined for Summer sessions, which currently permits dual credit students to register for courses exceeding the recommended number.
- Dual credit students who enroll in regular college courses, categorized as Independent dual credit students, are doing so without the knowledge of the school districts and without consultation with STC's Dual Credit Program staff. The College has recently experienced an increase of Independent dual credit students who enroll in regular college sections without academic advising.

### **Current Proposed Revisions to Policy #3232**

During the Summer 2018 sessions, administration noticed that a significant number of dual credit students were able to enroll in courses outside the scope of the policy and the Memorandum of Understanding signed with the partnering school districts. While administration was happy to observe that the students were largely successful in these courses, some of them taking as many as four courses during each summer session, administration must ensure that students are properly advised according to accreditation standards. Proper advisement ensures that students are aware of the potential impact on financial aid and are following their degree plan.

Furthermore, high school students were able to sign up for sections that were not set up for dual credit courses, which should be restricted for case-by-case approval by the College and School District administration of each student's academic needs.

The proposed revisions to Policy #3232 included:

- Providing an exemption to the 68-credit hour cap on dual credit courses for students pursuing the Associate of Science in Pre-Pharmacy.
- Limiting the enrollment of dual credit students during summer sessions to two courses for Summer I and III, and to two courses for Summer II, to close the "loophole" in the policy.
- Providing an internal approval process for dual credit students to sign up for courses outside the scope of Dual Credit Program agreements with partnering districts, upon approval by the STC Dean of Dual Credit Programs and School

District Partnerships, and clarifying that tuition and fees will not be waived for such regular courses taken outside the scope of Dual Credit Program agreements.

The proposed revision were provided in the packet, with the additional language highlighted in yellow and italicized and deletions marked with red strikethrough. At the meeting, Mr. Hebbard distributed an updated revision, with further minor clarifications.

Mr. Gary Gurwitz reviewed the proposed revisions, and provided suggestions that clarified the language and intention of the changes. Administration agreed to include the additional changes into the proposed revision to be presented to the Board for final adoption.

As the sole present committee member, Mr. Gary Gurwitz recommended Board approval of the revision of Policy #3232: *Dual Credit Student Eligibility Requirements* as discussed and which would supersede any previously adopted Board policy.

### **Presentation and Discussion on the Vision, Mission, and Core Values (VMV) Committee**

South Texas College Board Policy #900 calls upon the College to have a Comprehensive Mission, including an institutional Vision, Purpose, Core Values, Guiding Principles, and Strategic Directions. These serve as the foundation for all institutional operations, programs, and activities, which must all be consistent with the framework provided by the Comprehensive Mission.

This is consistent with the College's accreditation requirement, by the Southern Association of Colleges and Schools – Commission on Colleges (SACSCOC), which will review the institutional mission as part of their principles of accreditation review. As stated by SACSCOC:

*“A clearly defined and comprehensive mission guides the public’s perception of the institution. It conveys a sense of the institutions uniqueness and identifies the qualities, characteristics, and values that define its role and distinctiveness within the diverse higher education community. Fundamental to the structure of an institutions effectiveness, the mission reflects a clear understanding of the institution by its governing board, administration, faculty, students, staff, and all constituents.”*

*– 2018 Principles of Accreditation, SACSCOC, Section 2*

Dr. David Plummer, Vice President for Information Services, Planning, Performance, & Strategic Initiatives, and Dr. Fernando Chapa, Dean for Institutional Research, Effectiveness, & Strategic Planning, presented on the South Texas College *Vision, Mission, Core Values (VMV) Committee*, which was charged with developing an

aspirational vision statement, a shared understanding of the institution's intended direction (mission), and a set of core values that communicate the essence of the institution's identity and support the vision.

A committee comprised of representatives from each Division, campus, and employee classification throughout the College was formed in March 2018 to begin the development of the revised institutional Vision, Mission, and Core Values.

Throughout the Spring and Summer 2018 semesters, the VMV Committee met to develop and refine a draft document and solicit feedback from stakeholders throughout the College. After several cycles of such feedback and revision, the VMV Committee brought the document to various institutional committees, such as:

- President's Cabinet,
- President's Administrative Staff,
- Planning & Development Committee,
- Academic Council, and
- Professional Development Day Fall 2018

At each presentation, further feedback and comment were solicited and incorporated as appropriate. This process was again repeated through the conclusion of the drafting process in September 2018. The finalized document would be used by the Strategic Planning Committee as a guide in developing the formal 2019 – 2025 Strategic Directions and Strategic Goals for South Texas College.

Dr. Plummer and Dr. Chapa reviewed the process with the Education and Workforce Development Committee for preliminary feedback, while working on the revision to the College's current *2013 - 2018 Comprehensive Mission*, which will be revised and updated in order to support the development of the College's 2019-2025 Strategic Plan.

This document will include the College's:

- Vision,
- Institutional Mission, and
- Core Values.

The current and proposed revisions are as follows:

## **Vision**

### Current:

*South Texas College is a world-class institution advancing regional prosperity through education for a better quality of life in our community.*

Proposed Revision:

*South Texas College will be a global model in educational innovation serving as a catalyst to drive regional prosperity, economic development, and the social mobility of those we serve.*

**Main Purpose**

Current:

*South Texas College is an innovative, public, post-secondary institution providing quality education and career pathways for the people and communities of Hidalgo and Starr counties. The College achieves student success, nurtures talent development, and promotes economic vitality through collaborative and creative approaches to teaching, learning, and support services.*

Proposed Revision:

*South Texas College is a public institution of higher education that provides educational opportunities through excellence in teaching and learning, workforce development, cultural enrichment, community service, and regional and global collaborations.*

**Core Values**

Current:

1. **Student Success:** *We promote student success and completion through the implementation of diverse strategies and initiatives.*
2. **Opportunity:** *We value providing access and opportunities to students to meet the needs of our communities.*
3. **Excellence:** *We value excellence in teaching, learning, and all support services.*
4. **Innovation:** *We encourage creativity and champion innovative approaches to teaching, learning, and services.*
5. **Community:** *We value engaging the community in students' learning experiences and in the positive transformation of our region.*
6. **Professionalism:** *We demonstrate professionalism through collegiality, respect, and recognition for each other.*
7. **Collaboration:** *We value collaboration and communication among STC employees and STC constituents.*
8. **Integrity:** *We value integrity through honest and transparent communication and courageous dialogue.*



Proposed Revision:

1. **Student Success:** *We are committed to the personal, academic and career goals of each student.*
2. **Excellence:** *We are committed to excellence and innovation in teaching, learning, and services.*
3. **Opportunity:** *We are committed to providing access and support for students to achieve their academic and career goals.*
4. **Community:** *We are committed to equitable results through inclusion, diversity, collaboration, and engagement.*
5. **Integrity:** *We are committed to respect, professionalism, honesty, accountability, and transparency.*

This information is presented for the Committee's review and feedback to administration, and no action is requested.

Mr. Gurwitz was supportive of the effort to generally improve upon and make more efficient the College's Vision, Mission, and Core Values.

Mr. Gurwitz suggested the following revision to the proposed Core Value "Integrity":

5. **Integrity:** *We are committed to being respectful, professionalism, honesty, accountability, and transparency.*

No action was requested or taken.

## Adjournment

There being no further business to discuss, the Education Workforce Development Committee Meeting of the South Texas College Board of Trustees adjourned at 4:28 p.m.

I certify that the foregoing are the true and correct Minutes of the November 6, 2018 Education and Workforce Development Committee of the South Texas College Board of Trustees.

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Mr. Gary Gurwitz  
Presiding

## **Review and Recommend Approval of the Diagnostic Medical Sonography Associate of Applied Science Program**

The Education and Workforce Development Committee is asked to recommend Board approval to offer a Diagnostic Medical Sonography Associate of Applied Science program.

The proposed Diagnostic Medical Sonography Associate of Applied Science Degree would allow students to gain the knowledge and skills necessary to seek employment as a certified diagnostic medical sonographer, including extensive knowledge in ultrasound physics and instrumentation, use of Doppler imaging, cross-sectional anatomy and pathophysiology. Clinical and practicum aspects of the program will include hands-on training with experienced sonographers in various medical facilities.

EMSI data indicates a strong demand for Diagnostic Medical Sonographers in the local region, with an expected 24.7% growth in demand in the Lower Rio Grande Valley from 2018 – 2028.

Upon completion, students with the Diagnostic Medical Sonography Associate of Applied Science Degree would be eligible and prepared for the American Registry for Diagnostic Medical Sonography (ARDMS) national examination

Program implementation costs would be low, as South Texas College currently offers the necessary coursework, including for its current Advanced Technical Certificate in Diagnostic Medical Sonography.

The following pages contain the Program Development Packet, which includes:

- Program Development Checklist
- Program Demand and Projected Outcomes
- Program Summary
- Enrollment Management Plan
- Student Survey
- Proposed Curriculum & Course Descriptions
- Instructional Costs and Projected Revenues
- Supporting Documents:
  - Advisory Committee Members List
  - Letters of Support

Dr. Anahid Petrosian, Vice President for Academic Affairs, and Dr. Murad Odeh Interim Administrator for Curriculum & Student Learning, will review the proposed new program and the development process with the Committee and will respond to questions.

The Education and Workforce Development Committee is asked to recommend Board approval to offer the Diagnostic Medical Sonography Associate of Applied Science program as presented.



SOUTH TEXAS  
COLLEGE

**Program Development Packet**  
**for**  
**Diagnostic Medical Sonography**  
*Associate of Applied Science*

**Academic Affairs Division**  
Office of Curriculum & Student Learning

November 9, 2018



## **Diagnostic Medical Sonography AAS**

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**Program Development Approval Checklist.....3**

**Curriculum & Student Learning Department Recommendation .....4**

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**Program Summary .....10**

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**Instructional Costs and Projected Revenue .....25**

**Supporting Documentation .....28**

- **Advisory Committee Members List**
- **Letters of Support**

## Diagnostic Medical Sonography AAS

APPROVAL PROCESS FOR IMPLEMENTATION		DATE
✓	Advisory Committee	9/11/2018
✓	Division Committee	10/3/2018
✓	Department Chair Approval	10/16/2018
✓	Dean Approval	10/16/2018
✓	College-Wide Curriculum Committee	10/16/2018
✓	Academic Council	10/29/2018
✓	Planning and Development Council (PDC)	11/9/2018
<input type="checkbox"/>	Education and Workforce Development Committee (EWDC)	12/4/2018
<input type="checkbox"/>	STC Board of Trustees (Certification Form)	12/13/2018
<input type="checkbox"/>	Higher Education Regional Council	-
<input type="checkbox"/>	Texas Higher Education Coordinating Board (THECB)	-
<input type="checkbox"/>	Southern Association of Colleges and Schools – Commission on Colleges (SACSCOC)	-

## Program Development Process

Proposed instructional programs at South Texas College are identified either at the college or divisional level through environmental scans, documented workforce needs, recommendations by Program Advisory Committees, or local business and industry demands. All proposed programs undergo a review process before being approved for development. The approval process includes reviews by department, division, and college-wide curriculum committees, and Academic Council. Programs that receive approval to proceed are then presented to the Planning and Development Council (PDC) for review and recommendation. A program that receives PDC approval to move forward is presented to the Board of Trustees' Education Workforce Development Committee (EWDC) for review and recommendation. Following review by the EWDC, programs are presented to the full Board of Trustees for final review and approval.

## Recommendation: AAS - Diagnostic Medical Sonography

*At this point in the process, the AAS in Diagnostic Medical Sonography has received a recommendation to proceed from the department's Program Advisory Committee, and the department, division, and college-wide curriculum committees. After reviewing all required documentation submitted by the department, the Office of Curriculum & Student Learning recommends that South Texas College continue with the established approval process for the Associate of Applied Science (AAS) degree in Diagnostic Medical Sonography.*

The proposed AAS degree would allow graduates to gain the skills and competencies required for employment as a certified diagnostic medical sonographer. According to Economic Modeling Specialists, Inc., which utilizes data from the Texas Workforce Commission, Diagnostic Medical Sonographer positions are expected to grow by 24.7% from 2018 to 2028 in the Lower Rio Grande Regional Area. In addition, Diagnostic Medical Sonographers are listed on the Texas Workforce 2016 Target Occupation List for the Lower Rio Grande area. Letters of support from South Texas Health Systems (McAllen Medical/McAllen Heart Hospital), Rio

Grande Regional Hospital, Mission Regional Medical Center, and Edinburg Regional Medical Center & Children's Hospital have demonstrated strong employer support to address healthcare sector needs for the growing population of the Rio Grande Valley.

Student demand exists and is documented through student survey data. According to a survey conducted by South Texas College's Research & Analytical Services department, there is high student interest in enrolling in the AAS degree in Diagnostic Medical Sonography. Additionally, student demand is supported by high enrollment in related programs such as the Radiologic Technology AAS degree. The cost to implement this program would be moderately low as STC currently offers all of the courses required for this degree through the currently offered Advanced Technical Certificate (ATC) in Diagnostic Medical Sonography. Current faculty, who are teaching in the ATC, will teach the sections for this program, as the Certificate and AAS share the same courses. In addition, one to two adjunct faculty will be employed to support the additional introductory course sections required for program admission. Current classroom and lab facilities will be used for all courses required by this program. However, additional sections, classrooms and lab supplies will be needed to accommodate the expected increase of student capacity in the cohort.

*A review conducted by the Curriculum & Student Learning department indicates the program complies with the criteria set forth from the Texas Higher Education Coordinating Board and recommends the proposed Associate of Applied Science in Diagnostic Medical Sonography continue through the approval process.*

## Career & Technical Education/Workforce Programs

Program Demand and Projected Outcomes must be documented prior to the development of any new workforce or academic program. The following questions and checklist serve as an initial guide for program developers that must be completed at the start of the development process.

### Proposed Award:

Program Title: AAS – Diagnostic Medical Sonography

Program Location: NAH Campus

Academic Year to be Implemented: 2019-2020 (Spring 2020)

Please list any similar programs currently offered by STC in this subject area, if applicable (stackable certificates or degrees, AAS Specializations, etc.)

ATC- Diagnostic Medical Sonography

### For Curriculum Office Use Only

Program Developer Info:

Name: Crystal Bird

Title: Program Chair – Diagnostic Imaging.

Division: NAH

Phone: 872-3101

Proposed CIP Code: 51.0910

Substantive Change:        X  
Yes No

### 1. Documentation of Program Checklist:

Category	Standard	Met the Standard	Did not meet the Standard	Comments
1. Occupational Need	A) *EMSI data (provided by the Office of Curriculum & Student Learning) projects at least a 15% occupational growth rate in <b>South Texas, the state, and/or nationally.</b>	X		South Texas – 24.7% (+ 48 jobs) Texas – 29.7% (1,657 + jobs) Nation – 21.9% (15,460 +jobs)
	A-1)*Wage data			South Texas - \$33.80/hr Texas - \$33.61/hr National - \$33.49/hr
	A-2)*Job Posting Intensity (Average posting intensity is 6:1)			South Texas – 5:1 (99 unique postings out of a total of 479 postings) Texas – 5:1 (1,847 unique postings out of 9,883 Total Postings)
	<i><b>*Growth rates and wage data are estimated projections for a 10-year period from 2018-2028. Job Posting Intensity is derived from the time period of March 2018 – September 2018. Data sources include the U.S. Department of Commerce, U.S. Department of Labor, U.S. Census Bureau, U.S. Department of Education. For a complete list, refer to the EMSI Data Source Appendix.</b></i>			
	B) Occupational Outlook Handbook indicates graduates will have an average or above average job outlook for the next 5 to 10 years ( <b>national data</b> ).	X		17% (much faster than average of 7% for all occupations)



Category	Standard	Met the Standard	Did not meet the Standard	Comments
	C) Program is on Targeted/In-Demand Occupations lists produced by the Texas Workforce Commission OR Program is an emerging and/or evolving occupation for the region or state in the <b>Texas Workforce Commission's Labor Market and Career Information</b> .	X		The Diagnostic Medical Sonographers occupation is listed on the Texas Workforce 2016 Target Occupation List for the Lower Rio Grande area.
	D) Job demand and wage data is documented through the <b>survey of 8-12 top local employers</b> .	Due to high demand exemplified in items (B) and (C), the employer survey was not needed.		
	E) High employer demand exists and is documented through <b>letters of support</b> .	X		Received 4 letters of support from South Texas Health Systems (McAllen Medical/McAllen Heart Hospital), Rio Grande Regional Hospital, Mission Regional Medical Center, and Edinburg Regional Medical Center & Children's Hospital.
	F) <b>Educational and/or employer publications</b> or news articles document a growth in the industry or demand for employees.	X		Career Education Colleges and Universities: <a href="https://www.career.org/news/shortage-of-skills-high-growth-for-diagnostic-medical-sonographers">https://www.career.org/news/shortage-of-skills-high-growth-for-diagnostic-medical-sonographers</a>  AMN Healthcare: <a href="https://www.amnhealthcare.com/latest-healthcare-news/sonography-technician-jobs/">https://www.amnhealthcare.com/latest-healthcare-news/sonography-technician-jobs/</a>
<b>2. Student Demand</b>	Student demand exists and is documented through the use of <b>student surveys</b> .	X		The proposed AAS – Diagnostic Medical Sonography ranked above the average rating in all interest & perception measures. For additional information, refer to the RAS Student Survey Report.
	<b>High enrollment</b> exists in related programs (Stackable certificates or degrees).	X		During the Fall 2017 semester there were: <b>352</b> students enrolled in the Radiologic Technology AAS degree.
	High number of <b>graduates</b> are produced in related programs within the past 5 years (Stackable certificates or degrees).	X		Within the 2012-2013 through 2016-2017 academic years there were: <b>190</b> graduates in the Diagnostic Imaging department.
<b>3. Existing Programs</b>	Similar programs <b>do not exist</b> at public institutions within STC's service area – Hidalgo and Starr Counties (Please include documentation of the nearest similar programs).	X		Texas Southmost College (which is approximately 60 miles from McAllen) offers an AAS-DMS.  Del Mar College (which is approximately 157 miles from McAllen) offers an AAS-DMS/Echocardiography.

Category	Standard	Met the Standard	Did not meet the Standard	Comments
<b>4. Program Linkage &amp; Opportunities for Further Education</b>	Courses are currently offered or can be offered within <b>local high schools via the Dual Enrollment Program.</b> (Please provide a list of schools and/or districts)		X	<p>Dual enrollment for this program is not anticipated due to the following reasons:</p> <ul style="list-style-type: none"> <li>Lack of faculty with required American Registry for Diagnostic Medical Sonography (ARDMS) certifications in Abdomen (AB) and Obstetrics and Gynecology (OB/GYN) in the K-12 setting.</li> <li>Current clinical affiliates were contacted in regards to clinical/practicum courses and students must be a minimum of 18 years of age in order to practice at the many of the clinical sites.</li> </ul>
	<b>Program-specific articulation</b> agreements with other institutions of higher education (IHEs) currently exist or will be pursued in the future (Please include list of IHEs)	X		<p>The technical coursework from the AAS in Diagnostic Sonography would be accepted as the lower division elective requirements for the STC's Bachelor's in Medical and Health Services Management and Technology Management and the Bachelor's in Organizational Leadership. In addition, STC would pursue the potential transfer of coursework to Bachelor of Applied Arts and Sciences (BAAS) degrees including:</p> <ul style="list-style-type: none"> <li>University of North Texas</li> <li>Sam Houston State University</li> <li>Texas Woman's University</li> <li>University of Houston – Downtown</li> <li>University of Houston Victoria</li> <li>UT-Tyler</li> <li>Texas A&amp;M Commerce</li> <li>Texas State University</li> </ul>

## 2. Projected Outcomes:

Category	Standard	Met the Standard	Did not meet the Standard	Comments
1. <b>Program Enrollment &amp; Declared Majors</b>	Program projects a steady increase in the <b>number of declared majors</b> in the program over the course of five years.	X		
2. <b>Number of Graduates</b>	Program Review Standard: The Program will achieve a minimum of 5 graduates per year or <b>25 graduates during</b> the most recent 5-year period.	X		
3. <b>Graduate Earnings</b>	EMSI data (provided by the Office of Curriculum & Student Learning) projects that program graduates will earn a <b>median hourly earnings</b> wage that is above the “living wage” for South Texas, the state, and/or nationally.	X		<p>South Texas - \$33.80/hr  Texas - \$33.61/hr  National - \$33.49/hr</p> <p>According to the Bureau of Labor Statistics, Diagnostic Medical Sonographers earned a median salary of \$65,620 as of 2017.</p> <p>Living wage calculation for Texas - \$11.03 per hour  Source:  <a href="http://livingwage.mit.edu/states/48">http://livingwage.mit.edu/states/48</a></p>

## **Program Summary**

**Institution:** South Texas College, McAllen Texas

**Proposed Award:** Associate of Applied Science in Diagnostic Medical Sonography

### **PROGRAM DESCRIPTION**

**Program Objective:** The objective of the Diagnostic Medical Sonography program is to provide students with the knowledge and skills necessary for employment as a certified diagnostic medical sonographer. The program provides educational and clinical experience that result in extensive knowledge in ultrasound physics and instrumentation, use of Doppler imaging, cross-sectional anatomy and pathophysiology in the abdomen, pelvis, obstetrics, gynecology, and superficial structures. Throughout the clinical and practicum aspects of the program, students will train in various medical facilities with experienced sonographers in mastery of patient care and procedural skills. Upon successful completion of the program, students will be competent to challenge the abdomen and obstetrics specialty examinations offered by the American Registry for Diagnostic Medical Sonography (ARDMS) national examination.

**Curriculum:** The Associate of Applied Science in Diagnostic Medical Sonography degree includes 60 semester credit hours (SCH) of course work. Twenty credit hours are derived from the Academic Course Guide Manual and include the 15 semester credit hours in general education required by the regional accreditation. Forty semester credit hours are derived from the Workforce Education Course Manual (WECM) to account for the technical coursework of the program.

**Admissions Requirements:** The admissions requirements for this program would follow the general admissions policies set forth in the South Texas College catalog. However, this award falls under a selective program that has a competitive entry selection process based on a competitive point system. Program admission requirements will apply.

### **PROGRAM DEMAND**

#### **Occupational Need:**

Diagnostic Medical Sonographers is currently listed on the Texas Workforce 2016 Target Occupation List for the Lower Rio Grande Area. According to the 2016 Target Occupation List for the Lower Rio Grande region, Diagnostic Medical Sonographers earn a median hourly wage of \$31.92 with an entry hourly wage of \$28.05. The typical education requirement for this occupation is an Associate's Degree.

### **EMSI Summary of Data**

According to Economic Modeling Specialists, Inc. which utilizes data from the Texas Workforce Commission, Diagnostic Medical Sonographers are expected to experience a 24.7% growth from 2018 to 2028 in the Lower Rio Grande Regional Area (Cameron, Hidalgo, Starr and Willacy counties) with 48 additional job openings expected during this time period; a 29.7% growth between 2018 and 2028 in State of Texas with 1,657 additional job openings expected during this time period; and a 21.9% growth between 2018 and 2028 nationally with a total of 15,460 job openings expected during this time period. Sample reported job titles include Ultrasound Technologist, Ultrasound Technician, Staff Sonographer and Cardiac/Vascular Sonographer.

According to the Economic Modeling Specialist Occupation, Inc., the median hourly earnings wage for Diagnostic Medical Sonographers is \$33.80/hr. for Cameron, Hidalgo, Starr and Willacy Counties; \$33.61/hr. for the State of Texas; and \$33.49/hr. as a national average.

According to the U.S. Department of Labor, Occupational Outlook Handbook, employment of Diagnostic Medical Sonographers are expected to grow by 17% over the 2016-2026 decade. The 2017 median annual earnings for Diagnostic Medical Sonographers was \$65,620 nationally.

The job posting intensity for this occupation for the region was 5:1, meaning for every 5 job postings, there was 1 unique job to fill for a total of 99 unique job postings. The job posting intensity for the state was 5:1, with a total of 1,847 unique job postings.

### **Publications:**

According to AMN Healthcare news, the driving force behind the demand for Diagnostic Medical Sonographers are the “aging baby boomers, who rely on ultrasound technology to diagnose blood clots and heart disease.” Ultrasound technology is less expensive and less invasive than other procedures. Career.org reports that Diagnostic Medical Sonography is one of the professions in which employers demand job-ready employees but the prospects are not able to bridge the skills gap without the appropriate training, which causes a shortage of skills.

### **Student Demand:**

A survey sample of 2000 student yielded 287 responses (14%). The margin of error associated with this survey is plus/minus 6%. The survey revealed the following results:

- Thirty-three percent (33%) of students preferred AAS Diagnostic Medical Sonography to their current major;
- Eighty-seven percent (87%) felt it sounded like a good-paying job;
- Eighty percent (80%) felt it sounded like a job that would make their family proud; and
- Seventy-six percent (76%) felt it sounded like the kind of job that employers are hiring for in the Rio Grande Valley.

### **Existing Programs:**

- Texas Southmost College (approximately 60 miles from McAllen) offers an Associate of Applied Science degree in Diagnostic Medical Sonography.
- Del Mar College (approximately 157 miles from McAllen) offers an Associate of Applied Science in Diagnostic Medical Sonography/Echocardiography.

**Program Linkage and Opportunities for Further Education:** Coursework from the Workforce Education Course manual (WECM) should transfer to other community or technical colleges offering the same courses within a Diagnostic Medical Sonography program. Currently, the South Texas College Bachelors of Applied Technology in Medical Health and Services Management, Technology Management and the Bachelors of Applied Science in Organizational Leadership would accept credits from the technical coursework for the Associate of Applied Science (AAS) in Diagnostic Medical Sonography towards the lower-division requirements for the degrees. The AAS for Diagnostic Medical Sonography would have a minimum 15-credit general education requirement to comply with the Southern Association of Colleges and Schools Commission on Colleges accreditation requirements. This 15-credit general education requirement could also be applied towards the Core Curriculum requirements of the Bachelor degrees.

The technical coursework for the proposed associate's degree will not be offered as a dual credit due to the following reasons:

1. Insufficient faculty with required American Registry for Diagnostic Medical Sonography (ARDMS) certifications in Abdomen (AB) and Obstetrics and Gynecology (OB/GYN) in the K-12 setting.
2. Current clinical affiliates require a minimum of 18 years of age in order to practice at the clinical sites for the clinical/practicum courses required to complete the degree.

Therefore, the admission requirements for this proposed degree would require students to have a High School diploma or GED, be 18 years of age to participate in the clinicals.

#### **Expected Enrollment:**

The projected enrollment is based on availability of training opportunities in the local clinical affiliates. Students are required to work under the supervision of certified sonographers throughout the duration of the program.

<b>Years</b>	<b>2019-2020</b>	<b>2020-2021</b>	<b>2021-2022</b>	<b>2022-2023</b>	<b>2023-2024</b>
<b>Freshman</b>	14	15	16	18	20
<b>Sophomore</b>	0	14	15	16	18

#### **PROGRAM SUPPORT**

**Faculty:** South Texas College currently offers all of the courses required for the Associate of Applied Science in Diagnostic Medical Sonography through the currently offered advanced technical certificate. The program anticipates offering additional course sections due to increase in the introduction course DMSO 1210 – Introduction to Sonography, which is recommended for students prior to applying to the program. A total of 6 additional sections are anticipated for the first year with a gradual increase in subsequent years. Current full-time faculty would be utilized

to cover some of the extra sections along with adding an additional adjunct instructor in the later years.

**Facilities and Equipment:** Current classroom and lab facilities will be used for all courses required by this program. Additional classroom and lab supplies will be needed to accommodate the increase of the student capacity in the cohort. Costs for equipment will be used to cover the purchase of imaging phantoms, which are specialized pieces of equipment used for calibration and testing to perform scans.

**New Costs:** Total costs for this program are projected to be \$83,172.60. The funding to defray the costs of this program will come from state appropriations: \$236,444.16 and tuition: \$409,860.00. The total projected 5-year revenue is \$646,304.16. See attached specific budget details.

## **INSTITUTIONAL EFFECTIVENESS**

**Program Review and Improvement Plans:** The Program Review Process at South Texas College is embedded within the bi-annual Institutional Effectiveness Assessment Plan cycle. Every academic and technical program at South Texas College monitors and reports on the following standards: graduation numbers, transfer rate, job placement rate, professional accreditations or certifications, licensure/credential exam pass rate, and program advisory committee meetings. Action plans are created for each program that does not meet its targeted outcomes.

**Accreditation:** The Associate of Applied Science in Diagnostic Medical Sonography is designed to be consistent with the standards of the Southern Association of College and Schools Commission on Colleges and Schools (SACSCOC).

# Enrollment Management Plan

## POTENTIAL SOURCE OF STUDENTS

The number of students identified as potential participants for the DMS Program Associate of Applied Science include various sources. Students in the program will be comprised of the general current STC student body, nursing & allied health graduates, and various members of the health care workforce who would like to extend their skills as a diagnostic medical sonographer. The student applicant pool will include, but not be limited to: current students, high school graduates, adults completing GED education programs, health care professionals currently working in the Rio Grande Valley, and individuals with undergraduate, graduate degrees or higher who are seeking an extension and/or change in career.

## MARKETING

The Diagnostic Medical Sonography Program will be marketed to various members of the public for continued growth of potential applicants and graduates. Targeted individuals will include high school/dual enrollment students, STC student population, nursing and allied health graduates, and additional members of the health care community. The program will be promoted through various activities that will include student advising sessions, presentations at various STC campuses, distribution of flyers, brochures, rack cards, and additional advertisement of the program in coordination with the STC Public Relations and Marketing Department.

## RETENTION

Faculty support, assistance, and tutoring will continue to be the primary resource for high retention and graduation rates for the program. Faculty will continue to utilize student-centered learning techniques, encourage active participation, and promote outside student learning activities. For additional resources, students will also continue to be referred to the NAH Student Success Specialist, Center for Learning Excellence (CLE) and additional student services available within the college.

## ENROLLMENT PROJECTIONS

The projected enrollment is based on availability of training opportunities in the local clinical affiliates. Students are required to work under the supervision of certified sonographers throughout the duration of the program.

Years	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
Freshman	14	15	16	18	20
Sophomore	0	14	15	16	18



**PROJECTED NUMBER OF GRADUATES**

The department projects that 90% of students enrolled in the program will complete the associate degree.

<b>Years</b>	<b>2019-2020</b>	<b>2020-2021</b>	<b>2021-2022</b>	<b>2022-2023</b>	<b>2023-2024</b>
<b>Freshman</b>	14	15	16	18	20
<b>Sophomore</b>	0	14	15	16	18
<b>Graduates</b> (90% target)	0	13	14	16	17



## Research & Analytical Services

### Student Survey

### Diagnostic Medical Sonography New Program

Field Dates: August 28-September 8, 2018

Sample Size: 287, margin of error +/- 6%

Matt Dabrowski, Qualitative Researcher

## Summary

Research & Analytical Services conducted a survey of students for the Curriculum & Student Learning Office. The eligible cohort was traditional students aged 18 and over, from which a sample of 2,000 was drawn. Two hundred and eighty-seven students (n=287, 14%) responded. The sample was post-stratified and weighted by gender and program division to create a representative portrait of all traditional students for the Fall 2018 semester. The margin of error associated with this survey is plus/minus 6%.

Student interest in an *AAS Diagnostic Medical Sonography* program was assessed. RAS tested six programs this semester, and the correct interpretation of the data is to compare against the average of this cohort.

For this cohort, AAS Diagnostic Medical Sonography was the top program tested across all measures. Students expressed an average interest of 5.0 on a 1-to-10, compared to 4.3 for the cohort average (cohort maximum 5.0). Allied Health (NAH) majors expressed an average interest of 5.7. Students rated the program on attributes that included *Prefer this program to my current major* (33% vs. cohort average 28%, cohort maximum 33%, NAH 43%), *Sounds like a good-paying job* (87% vs. cohort average 70%, cohort maximum 87%, NAH 88%), *Sounds like the kind of job that would make my family proud* (80% vs. cohort average 64%, cohort maximum 80%, NAH 81%), and *Sounds like the kind of job that employers are hiring for here in the Valley* (76% vs. cohort average 59%, cohort maximum 80%, NAH 79%).

The core market for the program is among female students (interest of 5.4 vs. males 4.0), as well as Math & Science (5.8) and Allied Health majors (5.7). Both males and females have a positive perception of the program, but *intensity* across measures is far higher among female students. For example, on the good-paying job measure, females were 33 points more likely to *strongly agree* than males (57% to 24%). The data reported in this document is weighted.

# Proposed Curriculum & Course Descriptions

# Diagnostic Medical Sonography

## Associate Degree in Applied Science Proposal

AY 2020-2021

<b>PREREQUISITE TERM</b>			<b>Lec Hrs</b>	<b>Lab Hrs</b>	<b>Ext Hrs</b>	<b>Cont Hrs</b>	<b>Credit Hrs</b>
DMSO	1210	Introduction to Sonography	2	0	0	32	2
<u>BIOL</u>	<u>2401</u>	<u>Anatomy &amp; Physiology I</u>	3	3	0	96	4
<u>BIOL</u>	<u>2402</u>	<u>Anatomy &amp; Physiology II</u>	3	3	0	96	4
<u>ENGL</u>	<u>1301</u>	<u>Composition</u>	<u>3</u>	<u>0</u>	<u>0</u>	<u>48</u>	<u>3</u>
Totals:			11	6	0	272	13

### FIRST YEAR

#### SPRING SEMESTER

DMSO	1460	Clinical	0	0	12	192	4
DMSO	1302	Basic Ultrasound Physics	3	0	0	48	3
DMSO	1441	Abdominopelvic Sonography	4	1	0	80	4
DMSO	2405	Sonography of Obstetrics/Gynecology	<u>4</u>	<u>1</u>	<u>0</u>	<u>80</u>	<u>4</u>
Totals:			11	0	12	368	15

#### SUMMER I SESSION

		<u>SBS Elective</u>	3	0	0	48	3
DMSO	1166	Practicum I	0	0	7	112	1
DMSO	2351	Doppler Physics	<u>3</u>	<u>0</u>	<u>0</u>	<u>48</u>	<u>3</u>
Totals:			6	0	7	208	7

#### SUMMER II SESSION

		<u>Humanities Elective</u>	3	0	0	48	3
DMSO	1167	Practicum II	0	0	7	112	1
DMSO	2353	Sonography of Superficial Structures	<u>3</u>	<u>0</u>	<u>0</u>	<u>48</u>	<u>3</u>
Totals:			6	0	7	208	7

### FALL SEMESTER

DMSO	2366	Practicum III	0	0	23	368	3
DMSO	1342	Intermediate Ultrasound Physics	3	1	0	64	3
DMSO	2342	Sonography of High Risk Obstetrics	3	1	0	64	3
DMSO	2441	Sonography of Abdominopelvic Pathology	<u>4</u>	<u>1</u>	<u>0</u>	<u>80</u>	<u>4</u>
Totals:			10	3	23	576	13

### SECOND YEAR

#### SPRING SEMESTER

DMSO	2367	Practicum IV	0	0	23	368	3
DMSO	2230	CAPSTONE: Advanced Ultrasound and Review	<u>2</u>	<u>1</u>	<u>0</u>	<u>48</u>	<u>2</u>
Totals:			2	1	23	416	5

Total Contact Hours: 2048

Total Credits Hours: **60**

Meets 15 credit hour General Education Requirement

# **AAS Diagnostic Medical Sonography**

## **Application Requirements:**

- A.** Meet general admission requirements to South Texas College.
- B.** Have a high school diploma or GED.
- C.** Be TSI Complete or TSI Exempt via State approved exam scores.
- D.** Complete the ACT exam including the writing component. Achieve an ACT composite of 19 or above and a minimum of 16 in all individual areas (English, Math, Reading, and Science). ACT Writing score must be a 6 or above. Scores must be current within the last 5 years. ACT exemptions are not permitted.
- E.** Complete all prerequisite courses with a minimum grade of "B" as listed in the Diagnostic Medical Sonography degree plan. BIOL 2401 and BIOL 2402 courses must be current within the last 5 years. DMSO 1210 must be current within 2 years from the application date. ACT exam scores are required prior to registration to DMSO 1210. No minimum score is required for entry in this course.
- F.** Earn a minimum cumulative GPA of 3.0 on a 4.0 scale in all courses listed in the Diagnostic Medical Sonography degree plan. This includes courses completed through South Texas College and transfer courses.
- G.** Participate in student advisement per program requirements. Students are required to attend advising sessions held by the Diagnostic Medical Sonography Program faculty and staff at the Nursing & Allied Health Campus.
- H.** Submit a completed Program application by the stated deadline.
- I.** Pass a background check, conduct check and drug screen through approved providers. Students with criminal histories must provide proof of certification eligibility from the American Registry for Diagnostic Medical Sonography (ARDMS) prior to application.
- J.** Meet technical standards as stated by the Diagnostic Medical Sonography Program.
- K.** Satisfy healthcare agency requirements prior to clinical practice.

Students who have met the above requirements may submit their application. Applications will be evaluated through a competitive selection process. Due to program size limitations, meeting application requirements does not guarantee admission into the program. A new applicant pool is established for each admission period. Applicants who were not admitted for the current application period must re-apply to be considered for a later application period.

# **AAS Diagnostic Medical Sonography**

## **Course Descriptions**

### **DMSO 1210 – INTRODUCTION TO SONOGRAPHY**

CRT HRS:02 LEC HRS:02 LAB HRS:00

This course is an introduction to the profession of sonography and the role of the sonographer. Emphasis is on medical terminology, ethical/legal aspects, written and verbal communication, and professional issues relating to registry, accreditation, professional organizations and history of the profession.

#### Course Learning Outcomes:

- Describe the historical development of ultrasound.
- List related professional organizations.
- Identify registry and lab accreditation requirements and process.
- Discuss clinical practice guidelines for sonographers.
- Explain medical, legal, and ethical aspects of the profession.

### **BIOL 2401 - ANATOMY & PHYSIOLOGY I**

CRT HRS:04 LEC HRS:03 LAB HRS:03

This is a study of the structure and function of the human body including cells, tissues, and organs of the following systems: integumentary, skeletal, muscular and nervous systems.

#### Course Learning Outcomes:

- Describe and apply anatomical terminology.
- Describe multi-cellular organization.
- Identify the components and explain the importance of homeostasis, and give specific examples for the integumentary, skeletal, muscular, and nervous systems
- Name, distinguish, and describe the structure of the major tissue types, and outline their functions.
- Describe the structure and function of the integumentary, skeletal, muscular, and nervous systems.

### **BIOL 2402 – ANATOMY & PHYSIOLOGY II**

CRT HRS:04 LEC HRS:03 LAB HRS:03

This is a continuation of the study of the structure and function of the human body including the circulatory, respiratory, digestive, urinary, reproductive, and endocrine systems. Consideration is given to metabolism, electrolyte and fluid balance, and human development.

#### Course Learning Outcomes:

- Identify the structure, location and regulation of the body's various endocrine cells and glands and describe the body's various hormones.
- Describe the structures and functions of the respiratory and cardiovascular systems.
- Describe the function of the lymphatic, immune systems, the composition and the function of blood, including the formed elements.
- Describe the structures and functions of the digestive, urinary systems with consideration given to metabolism, electrolyte and fluid balance.
- Describe the reproductive systems with consideration given to and human development.

- Analyze and evaluate various observations, facts and other information about a phenomenon of anatomy and physiology through creative thinking, innovation and inquiry, and synthesize ideas consistent with the information.
- Develop, interpret and express ideas concerning a topic of anatomy and physiology or results of laboratory work through written, oral and/or visual communication.
- Collect, manipulate and analyze anatomical and physiological data, and employ scientific reasoning, resulting in informed conclusions.
- Work effectively with others including ability to lead or participate, to consider different points of view, and to assign or carry out individual tasks, to support a shared purpose or goal in a field in anatomy and physiology.

### **ENGL 1301 - COMPOSITION**

CRT HRS:03 LEC HRS:03 LAB HRS:00

This course is an intensive study of and practice in writing processes, from invention and research to drafting, revision, and editing, both individually and collaboratively. Emphasis on effective rhetorical choices, including audience, purpose, arrangement, and style. Focus on writing the academic essay as a vehicle for learning, communicating, and critical analysis.

#### Course Learning Outcomes:

- Demonstrate knowledge of individual and collaborative writing processes.
- Develop ideas with appropriate support and attribution.
- Write in a style appropriate to audience and purpose.
- Read, reflect, and respond critically to a variety of texts.
- Use Edited American English in academic essays.

### **DMSO 1460 – CLINICAL**

CRT HRS:43 LEC HRS:00 LAB HRS:00 EXT HRS:12

This course is a health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

#### Course Learning Outcomes:

- As outlined in the learning plan, apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry
- Demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry.

### **DMSO 1302 – BASIC ULTRASOUND PHYSICS**

CRT HRS:03 LEC HRS:03 LAB HRS:01

This course is about the basic acoustical physics and acoustical waves in human tissue. Emphasis is on ultrasound transmission in soft tissues, attenuation of sound energy, parameters affecting sound transmission and resolution of sound beams.

#### Course Learning Outcomes:

- Describe the interaction of sound and soft tissues.
- Explain sound production and propagation.
- Summarize the basic principles and techniques of ultrasound.

### **DMSO 1441 – ABDOMINOPELVIC SONOGRAPHY**

CRT HRS:04 LEC HRS:04 LAB HRS:01

This course includes an overview of normal anatomy and physiology of the abdominal and pelvic cavities as related to scanning techniques, transducer selection, and scanning protocols.

#### Course Learning Outcomes:

- Identify the sonographic appearances of normal abdominal and pelvic structures.
- Explain physiology of abdominal and pelvic organs.
- Describe the appropriate scanning techniques according to standard protocol guidelines.

### **DMSO 2405 SONOGRAPHY OF OBSTETRICS/GYNECOLOGY**

CRT HRS:04 LEC HRS:04 LAB HRS:01

This course provides a detailed study of the pelvis and obstetrics/gynecology as related to scanning techniques, patient history and laboratory data, transducer selection, and scanning protocols.

#### Course Learning Outcomes:

- Identify the sonographic appearances of normal and abnormal female pelvis.
- Identify normal and abnormal obstetrical findings.
- Demonstrate appropriate scanning techniques using standard protocols.
- Evaluate patient history and laboratory data as it relates to sonography.

### **DMSO 1166 PRACTICUM I**

CRT HRS:01 LEC HRS:00 OFF CAMPUS LAB HRS:07

This course provides practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

#### Course Learning Outcomes:

- As outlined in the learning plan, apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry.
- Demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry.

### **DMSO 2351 - DOPPLER PHYSICS**

CRT HRS:03 LEC HRS:03 LAB HRS:00

This course provides an overview of the Doppler and hemodynamic principles relating to arterial and venous imaging and testing.

#### Course Learning Outcomes:

- Describe Doppler and hemodynamic principles and actions.
- Identify instrument options and transducer selection.
- Interpret methods of Doppler flow analysis.
- Differentiate common image artifacts.
- Describe potential bioeffects.



### **DMSO 1167 - PRACTICUM II**

CRT HRS:01 LEC HRS:00 OFF CAMPUS LAB HRS:07

This course provides practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

#### Course Learning Outcomes:

- As outlined in the learning plan, apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry.
- Demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry.

### **DMSO 2353 - SONOGRAPHY OF SUPERFICIAL STRUCTURES**

CRT HRS:03 LEC HRS:03 LAB HRS:00

This course provides a detailed study of normal and pathological superficial structures as related to scanning techniques, patient history and laboratory data, transducer selection, and scanning protocols.

#### Course Learning Outcomes:

- Identify sonographic appearance of normal and abnormal superficial structures.
- Identify appropriate scanning technique using standard protocol guidelines.
- Evaluate patient history and laboratory data as it relates to sonography.

### **DMSO 2366 - PRACTICUM III**

CRT HRS:03 LEC HRS:00 OFF CAMPUS LAB HRS:24

This course provides practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

#### Course Learning Outcomes:

- As outlined in the learning plan, apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry.
- Demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry.

### **DMSO 1342 - INTERMEDIATE ULTRASOUND PHYSICS**

CRT HRS:03 LEC HRS:03 LAB HRS:01

This course offers a continuation of Basic Ultrasound Physics, which includes interaction of ultrasound with tissues, mechanics of ultrasound production and display, various transducer designs and construction, quality assurance, bioeffects, and image artifacts. It may introduce methods of Doppler flow analysis.

#### Course Learning Outcomes:

- Describe pulse-echo principles and actions
- Identify instrument options and transducer selection; identify common image artifacts; and describe potential bioeffects.

### **DMSO 2342 - SONOGRAPHY OF HIGH RISK OBSTETRICS**

CRT HRS:03 LEC HRS:03 LAB HRS:01

This course provides an overview of maternal disease and fetal abnormalities. It includes scanning techniques, patient history and laboratory data, transducer selection, and scanning protocols.

#### Course Learning Outcomes:

- Identify and differentiate normal and abnormal fetal and maternal structures.
- Demonstrate pertinent measurement techniques and scanning techniques using standard protocols.
- Evaluate patient history and laboratory data as it relates to ultrasound.
- Select appropriate transducer for area of interest.

### **DMSO 2441 - SONOGRAPHY OF ABDOMINOPELVIC PATHOLOGY**

CRT HRS:04 LEC HRS:04 LAB HRS:01

This course provides an overview of the pathologies and disease states of the abdomen and pelvis as related to scanning techniques, patient history and laboratory data, transducer selection, and scanning protocols. Emphasis in the endocavity sonographic anatomy and procedures including pregnancy.

#### Course Learning Outcomes:

- Identify abnormal abdominal and pelvic structures.
- Identify scanning techniques using standard protocol guidelines.
- Evaluate patient history and laboratory data as it relates to sonography.

### **DMSO 2367 - PRACTICUM IV**

CRT HRS:03 LEC HRS:00 OFF CAMPUS LAB HRS:24

This course provides practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

#### Course Learning Outcomes:

- As outlined in the learning plan, apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry.
- Demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry.

### **DMSO 2230 - ADVANCED ULTRASOUND AND REVIEW**

CRT HRS:02 LEC HRS:02 LAB HRS:01

This course covers knowledge, skills and professional values within a legal and ethical framework addressing emerging technologies and professional development.

#### Course Learning Outcomes:

- Apply problem solving and critical thinking skills in the context of professional transition
- Demonstrate registry preparedness.
- Examine sonography practice within a collaborative ethical and legal framework.

# Instructional Costs & Projected Revenue

## Instructional Costs and Projected Revenue for AAS in Diagnostic Medical Sonography

Faculty Salary & Benefits	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	Totals
LHE Rate	\$ 575.00	\$ 575.00	\$ 575.00	\$ 575.00	\$ 575.00	
# of LHE's per Course	3.5	3.5	3.5	3.5	3.5	
Subtotal	\$ 2,012.50	\$ 2,012.50	\$ 2,012.50	\$ 2,012.50	\$ 2,012.50	
# of Sections Taught by Current Faculty	10	11	10	10	10	
# of Sections Taught by Adjunct	6	6	8	8	8	
# of Sections Taught by F/T	0	0	0	0	0	
Adjunct Salary	\$ 12,075.00	\$ 12,075.00	\$ 16,100.00	\$ 16,100.00	\$ 16,100.00	
Multiplied by Benefits Rate	1.148	1.148	1.148	1.148	1.148	
Total Salary for Adjunct	\$ 13,862.10	\$ 13,862.10	\$ 18,482.80	\$ 18,482.80	\$ 18,482.80	
F/T Faculty @ \$42,000	\$0	\$0	\$0	\$0	\$0	
Benefit Rate (F/T Salary X 30%=\$12,600.00)	\$0	\$0	\$0	\$0	\$0	
<b>Cost for Faculty Salary/Benefits</b>	<b>\$ 13,862.10</b>	<b>\$ 13,862.10</b>	<b>\$ 18,482.80</b>	<b>\$ 18,482.80</b>	<b>\$ 18,482.80</b>	<b>\$ 83,172.60</b>

Projected Revenue	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	Totals
State Appropriations *						
# of Sections	16	17	18	18	18	
# of Students per Section	12	12	14	14	16	
Total # of Students per Year	192	204	252	252	288	
# of Contact Hours per Student	96	96	96	96	96	
Total Contact Hours	18432	19584	24192	24192	27648	
Multiplied by State Funding Rate (2.73)	\$ 2.73	\$ 2.73	\$ 2.73	\$ 2.73	\$ 2.73	
State Appropriations Generated	\$ 50,319.36	\$ 53,464.32	\$ 66,044.16	\$ 66,044.16	\$ 75,479.04	
<b>State Appropriations Received</b>	<b>\$ 13,152.00</b>	<b>\$ 50,319.36</b>	<b>\$ 53,464.32</b>	<b>\$ 53,464.32</b>	<b>\$ 66,044.16</b>	<b>\$ 236,444.16</b>

\* State Appropriations funding is based on average funding per contact hour from previous biennium

Tuition	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	Totals
Enrollment # Projected	192	204	252	252	288	
Tuition Rate per Credit Hour	\$ 70.00	\$ 70.00	\$ 70.00	\$ 70.00	\$ 70.00	
Differential Tuition per Credit Hour	\$ 45.00	\$ 45.00	\$ 45.00	\$ 45.00	\$ 45.00	
Subtotal	\$ 22,080.00	\$ 23,460.00	\$ 28,980.00	\$ 28,980.00	\$ 33,120.00	<b>\$ 136,620.00</b>
# of Credit Hours per Course	3	3	3	3	3	
<b>Total Tuition</b>	<b>\$ 66,240.00</b>	<b>\$ 70,380.00</b>	<b>\$ 86,940.00</b>	<b>\$ 86,940.00</b>	<b>\$ 99,360.00</b>	<b>\$ 409,860.00</b>

**Notes:** LHE rate of \$575 was used as this program would need faculty with a minimum of an associate's degree to teach, as per Board Policy 4151. The number of sections are the additional sections that the program is anticipating in the conversion of the ATC to AAS award. The number of LHEs per course was taken as an average based on the proposed curriculum in which most of the DMSO courses averaged 3.5 LHEs. Contact Hours per student was derived from an average of 96 contact hours per course section.

**Operating Costs and Revenue Projections  
for  
AAS - Diagnostic Medical Sonography**

CATEGORY	INITIAL COST	BUDGET 2ND YEAR	BUDGET 3RD YEAR	BUDGET 4TH YEAR	BUDGET 5TH YEAR	TOTAL BUDGET
	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2019-2024
Faculty Salaries and Benefits	\$13,862.10	\$13,862.10	\$18,482.80	\$18,482.80	\$18,482.80	\$83,172.60
Supplies and Materials (Operating)	\$5,000.00	\$5,500.00	\$6,000.00	\$6,500.00	\$7,000.00	\$30,000.00
Library Resources	\$2,000.00	\$2,000.00	\$2,000.00	\$2,000.00	\$2,000.00	\$10,000.00
Equipment and Software (Capital)	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$100,000.00
Facilities (Furniture) (Operating)	\$0.00	\$500.00	\$500.00	\$500.00	\$500.00	\$2,000.00
Faculty Professional Development/(Travel)	\$5,400.00	\$5,400.00	\$5,400.00	\$5,400.00	\$5,400.00	\$27,000.00
<b>Subtotal - Instructional &amp; Operating Budget</b>	\$46,262.10	\$47,262.10	\$52,382.80	\$52,882.80	\$53,382.80	\$252,172.60
<b>Total Budget Per Year</b>	<b>\$46,262.10</b>	<b>\$47,262.10</b>	<b>\$52,382.80</b>	<b>\$52,882.80</b>	<b>\$53,382.80</b>	<b>\$252,172.60</b>

CATEGORY	REVENUE	REVENUE	REVENUE	REVENUE	REVENUE	TOTAL
	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2019-2024
<b>State Appropriations</b>	\$ 13,152.00	\$ 50,319.36	\$ 53,464.32	\$ 53,464.32	\$ 66,044.16	\$ 236,444.16
<b>Tuition</b>	\$ 66,240.00	\$ 70,380.00	\$ 86,940.00	\$ 86,940.00	\$ 99,360.00	\$ 409,860.00
<b>TOTAL REVENUE</b>	<b>\$ 79,392.00</b>	<b>\$ 120,699.36</b>	<b>\$ 140,404.32</b>	<b>\$ 140,404.32</b>	<b>\$ 165,404.16</b>	<b>\$ 646,304.16</b>

# Supporting Documentation

- Advisory Committee List
- Letters of Support

## **AAS Diagnostic Sonography Advisory Committee Membership**

<b>Name</b>	<b>Title</b>	<b>Email</b>
Joe Martinez, BS, RT(R)	Director of Radiology, Rio Grande Regional Hospital	<a href="mailto:joe.martinez@hcahealthcare.com">joe.martinez@hcahealthcare.com</a>
Kathleen Levy, ARRT(R)(N)	Director of Radiology, McAllen Medical Center and McAllen Heart Hospital	<a href="mailto:kathleen.levy@uhsrgv.com">kathleen.levy@uhsrgv.com</a>
Robert D. Gonzalez, RT(R), RDMS, RVT	Radiology Coordinator, McAllen Heart Hospital	<a href="mailto:Robert.D.Gonzalez@uhsrgv.com">Robert.D.Gonzalez@uhsrgv.com</a>
Juan Aguirre, RT(R)	Radiology Supervisor, McAllen Medical Center	<a href="mailto:juan.aguirre@uhsrgv.com">juan.aguirre@uhsrgv.com</a>
Ralph Martinez, RT(R), BSN	Director of Radiology, Mission Regional Medical Center	<a href="mailto:rmartinez27@primehealthcare.com">rmartinez27@primehealthcare.com</a>
Juan Medina, RT(R)	Supervisor of Radiology, Mission Regional Medical Center	<a href="mailto:jmedina2@primehealthcare.com">jmedina2@primehealthcare.com</a>
Laurence Weinreich, MA, CRA, RT(R)	Director of Radiology, Edinburg Regional Medical Center and Children's Hospital	<a href="mailto:Laurence.Weinreich@uhsrgv.com">Laurence.Weinreich@uhsrgv.com</a>
Sandra Yanez, RT(R)	Assistant Director of Radiology, Doctors Hospital at Renaissance	<a href="mailto:s.yanez@dhr-rgv.com">s.yanez@dhr-rgv.com</a>
Maribel Tharp, RT(R)(M)	Radiology Manager, Doctors Hospital at Renaissance	<a href="mailto:m.tharp@dhr-rgv.com">m.tharp@dhr-rgv.com</a>



**Crystal Bird, MA, R.T.(R) (M)**  
**Chair, Diagnostic Imaging Department**  
**South Texas College**  
**1101 E. Vermont Ave.**  
**McAllen, Tx 78503**

**9 July 2018**

**Dear Mrs. Bird,**

**South Texas Health System Edinburg and Children's Hospital extends our support for South Texas College (STC), Ultrasound program and their program graduates.**

**The Edinburg and Children's hospital radiology department understands the importance of providing adults with a quality education to allow them to fill skilled workforce positions in healthcare and contribute to the economic vitality of the area. We are committed to assisting South Texas College with the clinical instruction of imaging students, and student placement when applicable.**

**We are thrilled to hear that your school is considering adding an AAS ultrasound program. This will not only benefit your students, but the entire Valley region as well. I applaud this commitment to even higher learning from your institution.**

**If you have any questions, or require additional information regarding our ongoing support for STC's imaging program, please do not hesitate to call.**

**Sincerely,**

**Laurence A Weinreich, MA, BAS, R.T. ( R ), CRA**  
**Director of Radiology**  
**Edinburg Regional Medical Center and Children's Hospital**  
**1102 W Trenton Road**  
**Edinburg, TX 78539**  
**Office Phone: 956-388-6831**  
**Fax: 956-388-6030**  
***Excellence in serving patients***  
**<http://www.edinburgregional.com/>**

Members of  South Texas Health System

Edinburg Regional Medical Center - McAllen Heart Hospital - McAllen Medical Center - South Texas Behavioral Health Center  
South Texas Rehabilitation Pavilion and coming soon.....Edinburg Children's Hospital





# Mission Regional Medical Center

Crystal Bird, M.A., R.T. (R) (M)  
Chair Diagnostic Imaging Department  
South Texas College  
1901 S. McColl Rd.  
McAllen, TX. 78503  
cbird@southtexascollege.edu

July 9, 2018

Dear Mrs. Bird

Mission Regional Medical Center extends our support to South Texas College for the Diagnostic Medical Sonography (DMS ) AAS Program. This change will increase the application pool, and give qualified applicants a chance to enroll in this program. I also believe this change will allow the student an opportunity to continue on a academic path.

Mission Regional recognizes the need for qualified Diagnostic Medical Sonographers. Mission Regional stands by STC in assisting with clinical instruction, and placement of registered sonographers as the need arises.

If I can answer any further questions in regards of our support, please do not hesitate to contact me, my contact information is below.

Respectfully,

Ralph E. Martinez, R.T.R., B.S.B.  
Director of Radiology/ Cath Lab  
Mission Regional Medical Center  
rmartinez27@primehealthcare.com



Crystal Bird, MA, R.T. (R)(M)  
Chair, Diagnostic Imaging Department  
South Texas College  
1101 E. Vermont Ave.  
McAllen, TX 78503

June 28, 2018

Dear Ms. Bird,

Rio Grande Regional Hospital extends our support for South Texas College (STC), Diagnostic Sonography Program.

Rio Grande Regional Hospital understands the importance of providing adults with a quality education to fill skilled workforce positions in healthcare and contribute to the economic vitality of the area. We are committed to assisting South Texas College with clinical instruction of Diagnostic Sonography student and the development of the AAS.

If you have any questions, or require additional information regarding our ongoing support for STC's ultrasound program, please do not hesitate to call.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Saenz", written over the word "Sincerely,".

Dr. Jorge Saenz, M.D.  
Radiology Medical Director

A handwritten signature in black ink, appearing to read "Joe Martinez", written over the word "Sincerely,".

Joe Martinez, B.S. R.T. (R) (MR)  
Director of Diagnostic Imaging Service



Crystal Bird, MA, R.T.(R) (M)  
Chair, Diagnostic Imaging Department  
South Texas College  
1101 E. Vermont Ave.  
McAllen, Tx 78503

9 July 2018

Dear Mrs. Bird,

South Texas Health System, McAllen Medical Center and McAllen Heart Hospital, extend our support for the South Texas College (STC), Ultrasound program and their program graduates.


McAllen Medical and McAllen Heart imaging departments understand the importance of providing adults with a quality education to allow them to fill skilled workforce positions in healthcare and contribute to the economic vitality of the area. We are committed to assisting South Texas College with the clinical instruction of imaging students, and student placement when applicable.

We are thrilled to hear that your school is considering adding an AAS ultrasound program. This will not only benefit your students, but all Valley hospitals.

Sincerely,

A handwritten signature in black ink, appearing to read "Kathy Levy".

*Kathy Levy ARRT(R)(N) CRA  
Director of Radiology  
McAllen Medical Center/McAllen Heart Hospital*

Members of  South Texas Health System

Edinburg Regional Medical Center - McAllen Heart Hospital - McAllen Medical Center - South Texas Behavioral Health Center  
South Texas Rehabilitation Pavilion and coming soon.....Edinburg Children's Hospital