



OFFICE OF THE PRESIDENT  
Dr. Joe Schaffer

To: LCCC Board of Trustees  
From: Dr. Joe Schaffer, President  
CC: Members, President's Cabinet  
Starla Mason, Dean, School of Health Science & Wellness  
Adrienne Wade, Program Director, Diagnostic Medical Sonography  
Date: 12 April, 2022  
Subject: New Program Proposals, Echocardiography

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As a result of our Guided Pathways initiative the College has committed to offering academic programs that are clear and intentional in design to meet students' goals in employment or further education. This commitment is emphasized in the LCCC Strategic Plan 2030. Goal 3 of that plan recognizes the unmet need for qualified employees in many of Wyoming's healthcare occupations and identifies capacity for growth in the School of Health Science & Wellness. It is with respect for the Guided Pathways tenets, the strategic planning of the College, and the employee demands of our region that I seek approval for two new credentials, the Echocardiography AAS to begin delivery in the Fall 2023 semester and the Echocardiography Certificate of Completion launching in Fall 2022.

**PROGRAMS' OVERVIEW:**

Echocardiography (Cardiac Sonography) is a medical imaging specialization to be offered in the Diagnostic Medical Sonography (DMS) program. Echocardiographers are sonographers who specialize in imaging the heart, its vessels, and the flow of blood through this vital organ. The demand for this specialty has increased as a result of the COVID-19 pandemic and the effects of COVID on the cardiovascular system; there are currently no Echocardiography programs in Wyoming. The only regional program, offered through Red Rocks Community College in Denver, requires a Bachelor's for admission.

Students of this program will sit for the national certifying exams of the American Registry of Diagnostic Medical Sonographers. Success on these exams lead to certification as a registered diagnostic cardiac sonographer (RDCS). Students are also eligible to be certified in Registered Cardiac Sonography (RCS) by Cardiovascular Credentialing International (CCI).

The Echocardiography programs are designed to serve two distinct audiences simultaneously. The AAS is aligned with the HS&W Pathway degree and is accessible to students who are interested in, but inexperienced with patient care. It is a limited-entry program with defined pre-admission requirements. The Certificate of Completion option has been designed to deliver the same discipline-specific coursework and experiences to currently licensed and practicing sonographers and medical imaging professionals wishing to specialize in cardiac sonography.

The need for these programs has been identified and discussed by the College's Diagnostic Medical Sonography program's Advisory Committee as well as the Radiography program's Advisory Committee. Additionally, collaborations with and local and regional healthcare employers including Cheyenne Regional Medical Center, University of Colorado-Health, Banner Health, and Cheyenne Vascular Clinic have helped shape this proposal.

#### PROGRAMS' OUTCOMES:

The programs have completed the required development and review process and have received approval of the Academic Standards Committee. Alignment of all new courses with the WCCC-lead common course numbering system has been confirmed and both programs meet the requirements of the College's degree requirements defined in Procedure 2.1.1P. The Associate of Applied Science is comprised of 65 credits, 36 of which are discipline-specific. The remaining 29 credits satisfy program-entry and/or General Education requirements. The Certificate of Completion is comprised of 55 credits. It includes the same program-specific requirements and also includes a reduced number of program-entry and/or General Education requirements.

Upon successful completion of either the AAS or the Certificate students will be able to:

1. Consistently create high quality diagnostic sonographic images of the cardiac system by the proficient use of technical factors.
2. Demonstrate professional communication skills.
3. Provide consistent, high-quality patient care.
4. Conduct themselves ethically and professionally in accordance with the profession.
5. Successfully pursue certification that allows for employment in an echocardiographic position.

Students will have the opportunity to meet these outcomes through the program-entry and/or General Education requirements and the following discipline sequence:

Echocardiography   Discipline Sequence			
1st Semester (Summer)			
	IMAG 1505	Intro to Diagnostic Medical Sonography	3
	IMAG 1500	Cross-sectional Anatomy	3
Semester Total:			6
2nd Semester (Fall)			
	IMAG 1510	Ultrasound Physics I	2
	IMAG 1560	Cardiac Sonography I	2
	IMAG 1561	Cardiac Sonography I Lab	1
	IMAG 2615	Cardiac Sonography Clinical Experience I	4
	IMAG 2620	Cardiac Sonography Clinical Experience II	5
	Choice	Approved Elective: US/Wyoming Constitution	3
Semester Total:			17
3rd Semester (Spring)			
	IMAG 1515	Ultrasound Physics II	3
	IMAG 1565	Cardiac Sonography II	2
	IMAG 1566	Cardiac Sonography II Lab	1
	IMAG 2600	Cardiac Registry Review	1
	IMAG 2630	Cardiac Sonography Clinical Experience III	9
Semester Total:			16

**STAFFING IMPACT:**

To meet the Commission on Accreditation of Allied Health Education Programs (CAAHEP) accreditation standards, an instructor certified in Echocardiography is required. There is currently no one on staff at LCCC with this credential.

**BUDGET IMPACT:**

While the program will be able to use the already existing Diagnostic Medical Sonography lab and equipment, there will be minimal equipment and/or instructional supply needs as well as accreditation fees, and advisory support. This, in addition to the anticipated staffing needs will cost approximately \$450,000 for program launch and the first three years of delivery. This figure was used in the initial program proposal to Governor Gordon in late 2021. The proposal was awarded 100% of its funding request as a project in the Wyoming Innovative Partnership (WIP).

More detailed information about both programs is provided in the attached New Program Request Forms prepared for the Wyoming Community College Commission.

# Wyoming Community College Commission

## NEW PROGRAM REQUEST FORM

<b>College</b>	Laramie County Community College				
<b>Date</b>	April 12, 2022				
<b>Program Title</b>	Echocardiography, AAS				
<b>Type of Credential</b>	<input type="checkbox"/> AA	<input type="checkbox"/> AS	<input type="checkbox"/> AFA	<input checked="" type="checkbox"/> AAS	<input type="checkbox"/> Certificate
	<input type="checkbox"/> Other	Click or tap to enter text.			
<b>Total Credit Hours</b>	65 (36 program-specific, 29 pre-requisite and/or required General Education)				
<b>CIP Code</b>	51.0910				
Classification of Instructional Programs/CIP obtained from the National Center for Educational Statistics at <a href="https://nces.ed.gov/ipeds/cipcode/browse.aspx?y=55">https://nces.ed.gov/ipeds/cipcode/browse.aspx?y=55</a> . Double check your recommendation with the course coordinator and/or Student Records.					
<b>Title</b>	Diagnostic Medical Sonographer				

Rationale for request	
<b>Type of Program</b>	<input type="checkbox"/> Transfer preparation <input checked="" type="checkbox"/> Short term workforce placement <input type="checkbox"/> One-year workforce placement <input type="checkbox"/> Special need endorsement
<b>Certificate Questions</b> <i>More than one may apply</i>	<input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b> local or state employer or industry specific <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b> nationally recognized <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b> examination or licensure preparation <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b> practicum <input type="checkbox"/> <b>Yes</b> <input checked="" type="checkbox"/> <b>No</b> stackable  <u>Title IV</u> Financial Aid Eligible <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b> (minimum of 16 semester hours) (Stafford Loans, Perkins Grants, Pell Grants and Federal Campus-based Grants)
<b>New program start</b>	<input type="checkbox"/> NA <b>OR</b> identify the semester the program will start: <b>Fall 2023</b>
<b>Taught by non-accredited vendors?</b>	<input type="checkbox"/> YES (see below) <input checked="" type="checkbox"/> NO  Click or tap to enter text.
<b>WCCC or State Priority</b>	<input checked="" type="checkbox"/> YES (see below) <input type="checkbox"/> NO <i>(See the <a href="#">WCCC website</a>, there are several programs which have a state priority, such as the Governor's Economically Needed Diversity Options for Wyoming/ENDOW</i>  The Healthcare industry has been and remains a significant priority for the State of Wyoming. As early as 2018, the state established a 20-year economic diversification strategy under the ENDOW effort, that established Knowledge and Creative as a next generation engine. This engine includes the healthcare industry. In addition, one of the ENDOW Building Blocks focused on health and quality of life. More recently, the Wyoming Business Council's strategic plan identified Healthcare as one of the first industries under the "Activate New Economic Sectors" component of this plan. The Wyoming Community College Commission's statewide strategic plan 2025 includes two goals relevant to this program: Goal 3 on Program Alignment, and Goal 4 on Economic Development focused on addressing workforce development gaps and supporting programs that align with the state's economic diversification strategies. Currently there are no Echocardiography programs in the state. An acute and growing

	demand for these professionals exists now, especially in SE Wyoming as a result of growing populations and the impacts of the COVID-19 Pandemic.
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Program Curriculum						
<b>Program Description</b>	<p>The echocardiography AAS program is a medical imaging program offered as a specialization in the Diagnostic Medical Sonography (DMS) program. The echocardiography program is an intensive, three-semester program, not including prerequisite courses, and is designed for students who wish to specialize into this area of medical imaging.</p> <p>The echocardiographer (cardiac sonographer) must have an in-depth knowledge of physics, pathophysiology, human anatomy and physiology, and sonographic technique to create diagnostic ultrasound and echocardiographic images. Physicians depend on the echocardiographer's experience to evaluate normal and abnormal anatomy of the cardiac system. Students of this program are eligible to sit for the national certifying exams of the American Registry of Diagnostic Medical Sonographers. Upon passing the Sonography Principles and Instrumentation and the Adult Echocardiography (AE) exams, a student is certified as a registered diagnostic cardiac sonographer (RDCS). Students are also eligible to be certified as a Registered Cardiac Sonography (RCS) by the Cardiovascular Credentialing International (CCI).</p>					
<b>New Curriculum</b>	<input checked="" type="checkbox"/> YES (see below) <input type="checkbox"/> NO					
<p>List the new courses <b>alphabetically</b>. Include prefix, course number, course title, credit hours. Check the <a href="#">Wyoming Transfer Catalog</a> for possible courses and numbers. Additionally, WCCC has a statewide common course numbering system (CCNS). Colleges must ensure all new courses are aligned with the CCNS. Confirm this alignment with the course coordinator and/or Student Records. Note that CCNS alignment and/or new course title and number requests to the WCCC will take at least a week to process.</p>						
College Catalog Considerations (check all that apply)	Prefix	Number	Title	Credits	<sup>^</sup> <a href="#">LOI</a>	
<input checked="" type="checkbox"/> New course <input type="checkbox"/> New number <input type="checkbox"/> New prefix <input type="checkbox"/> New title <input checked="" type="checkbox"/> CCNS alignment	IMAG	1560	Cardiac Sonography I	2	3	
<input checked="" type="checkbox"/> New course <input type="checkbox"/> New number <input type="checkbox"/> New prefix <input type="checkbox"/> New title <input checked="" type="checkbox"/> CCNS alignment	IMAG	1561	Cardiac Sonography I Lab	1	3	
<input checked="" type="checkbox"/> New course <input type="checkbox"/> New number <input type="checkbox"/> New prefix <input type="checkbox"/> New title <input checked="" type="checkbox"/> CCNS alignment	IMAG	2615	Cardiac Sonography Clinical Experience I	4	3	
<input checked="" type="checkbox"/> New course <input type="checkbox"/> New number <input type="checkbox"/> New prefix <input type="checkbox"/> New title <input checked="" type="checkbox"/> CCNS alignment	IMAG	2620	Cardiac Sonography Clinical Experience II	5	3	
<input checked="" type="checkbox"/> New course <input type="checkbox"/> New number <input type="checkbox"/> New prefix <input type="checkbox"/> New title <input checked="" type="checkbox"/> CCNS alignment	IMAG	1565	Cardiac Sonography II	2	3	
<input checked="" type="checkbox"/> New course <input type="checkbox"/> New number <input type="checkbox"/> New prefix <input type="checkbox"/> New title <input checked="" type="checkbox"/> CCNS alignment	IMAG	1566	Cardiac Sonography II Lab	1	3	
<input checked="" type="checkbox"/> New course <input type="checkbox"/> New number <input type="checkbox"/> New prefix <input type="checkbox"/> New title <input checked="" type="checkbox"/> CCNS alignment	IMAG	2600	Cardiac Registry Review	1	3	
<input checked="" type="checkbox"/> New course <input type="checkbox"/> New number <input type="checkbox"/> New prefix <input type="checkbox"/> New title <input checked="" type="checkbox"/> CCNS alignment	IMAG	2630	Cardiac Sonography Clinical Experience III	9	3	

Add new rows to this table by clicking the "+" at the end of the row above.

**TOTAL CREDITS** 25

^Course Coordinator can provide.

<b>Similar programs in Wyoming?</b> <a href="#">(See WCCC Program List)</a>	<input type="checkbox"/> <b>Yes (list Colleges below)</b> <input checked="" type="checkbox"/> <b>No</b> Click or tap here to enter text.		
<b>Discussions with other Community Colleges</b>	<input checked="" type="checkbox"/> <b>Yes (see below)</b> <input type="checkbox"/> <b>No (see rationale below)</b> This program and the associated Certificate of Completion are the result of a \$450,000 WIP Phase I allocation to LCCC. The programs were proposed as stand-alone additions to the Cheyenne campus-based, accredited Diagnostic Medical Sonography program. LCCC's interest in establishing this program has been shared with colleges through the Wyoming Innovation Partnership's Phase I and Phase II planning efforts.		
<b>Additional Resources (faculty, support services, equipment or supplies)</b>	<input checked="" type="checkbox"/> <b>Yes (see below)</b> <input type="checkbox"/> <b>No</b>  <b>STAFFING IMPACT:</b> To meet the Commission on Accreditation of Allied Health Education Programs (CAAHEP) accreditation standards, an instructor certified in Echocardiography is required. There is currently no one on staff at LCCC with this credential.  <b>BUDGET IMPACT:</b> While the program will be able to use the already existing Diagnostic Medical Sonography lab and equipment, there will be minimal equipment and/or instructional supply needs as well as accreditation fees, and advisory support. This, in addition to the anticipated staffing needs will cost approximately \$450,000 for program launch and the first three years of delivery. This figure was used in the initial program proposal and the WIP funding awarded 100% of the request.		
<b>Primary Student Audience</b>	This program is designed for individuals new to patient care as well as registered sonographers and technologists looking to advance their career in the medical field.		
<b>Anticipated three-year unduplicated headcount</b>	<b>Year one:</b> 10	<b>Year two:</b> 10-12	<b>Year three:</b> 16

### Projected Demand Nationally and in Wyoming

(Labor market anticipated demand upon completion of the program and wages for this career field)

Suggested data sources for Occupational Outlook and Wages:

- Career One Stop- [US Department of Labor](#)
- Bureau of Labor Statistics (occupational outlook handbook) <https://www.bls.gov/ooh/>
- Wyoming Labor Market Information (WLMI) <http://doe.state.wy.us/lmi/>

### Projected Demand

Location	Employment			
	Year 2020	+10 years	Percent Change	Job Openings
UNITED STATES	75,900	90,300	19%	7,300

	<b>Data Source:</b> <a href="https://www.careeronestop.org/Toolkit/Careers/Occupations/occupation-profile.aspx?keyword=Diagnostic%20Medical%20Sonographers&amp;onetcode=29203200&amp;location=UNITED%20STATES">https://www.careeronestop.org/Toolkit/Careers/Occupations/occupation-profile.aspx?keyword=Diagnostic%20Medical%20Sonographers&amp;onetcode=29203200&amp;location=UNITED%20STATES</a>
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WYOMING	Employment			
	Year 2018	+10 years	Percent Change	Job Openings
	67	85	26.9%	60
	<b>Data Source:</b> <a href="https://doe.state.wy.us/lmi/projections/2020/Long_Term_2018-28_29.htm">https://doe.state.wy.us/lmi/projections/2020/Long_Term_2018-28_29.htm</a>			

#### State and National Wages

Location	Pay Period	Year Enter 4-digit year.				
		10%	25%	Median	75%	90%
UNITED STATES	Hourly	\$25.86	\$30.30	\$36.50	\$43.72	\$50.65
	Yearly	\$53,790	\$63,020	\$75,920	\$90,940	\$105,340
	<b>Data Source:</b> <a href="https://www.careeronestop.org/Toolkit/StateAndLocal/Wages.aspx?soccode=292032%20&amp;location=UNITED%20STATES&amp;dataview=">https://www.careeronestop.org/Toolkit/StateAndLocal/Wages.aspx?soccode=292032%20&amp;location=UNITED%20STATES&amp;dataview=</a>					

Location	Pay Period	Year 2020				
		10%	25%	Median	75%	90%
WYOMING	Hourly	\$17.60	\$30.28	\$35.77	\$40.58	\$46.70
	Yearly	\$36,610	\$62,980	\$74,410	\$84,400	\$97,140
	<b>Data Source:</b> <a href="https://www.careeronestop.org/Toolkit/StateAndLocal/Wages.aspx?soccode=292032%20&amp;location=UNITED%20STATES&amp;dataview=">https://www.careeronestop.org/Toolkit/StateAndLocal/Wages.aspx?soccode=292032%20&amp;location=UNITED%20STATES&amp;dataview=</a>					

#### APPENDIX A- PROGRAM TERM BY TERM PLAN

Provide the program's term by term plan below

WCCC New Program Proposal | last modified 4.15.2022

**WCCD PROPOSED PROGRAM OF STUDY FOR: Echocardiography, AAS**

<b>RECOMMENDED CURRICULUM SEQUENCE: PROPOSED</b>			
<b>COURSE</b>			
<b>Prefix</b>	<b>Number</b>	<b>Title</b>	<b>Credits</b>
<i>Summer Semester 1<sup>st</sup> Year</i>			
IMAG	1505	Intro to Diagnostic Medical Sonography	3
IMAG	1500	Cross-sectional Anatomy	3
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
<b>Approved Elective options in this semester:</b> <input checked="" type="checkbox"/> n/a Click or tap here to enter text.			
TOTAL SUMMER SEMESTER			6
<i>Fall Semester 2<sup>nd</sup> Year</i>			
IMAG	1510	Ultrasound Physics I	2
IMAG	1560	Cardiac Sonography I	2
IMAG	1561	Cardiac Sonography I Lab	1
IMAG	2615	Cardiac Sonography Clinical Experience I	4
IMAG	2620	Cardiac Sonography Clinical Experience II	5
Click or tap here to enter text.	Click or tap here to enter text.	Approved Elective: US/Wyoming Constitution	3
<b>Approved Elective options in this semester:</b> <input checked="" type="checkbox"/> n/a ECON 1200 OR HIST 1211 OR HIST 1221 OR HIST 1251 OR POLS 1000			
TOTAL FALL SEMESTER			17
<i>Spring Semester 2<sup>nd</sup> Year</i>			
IMAG	1515	Ultrasound Physics II	3
IMAG	1565	Cardiac Sonography II	2
IMAG	1566	Cardiac Sonography II Lab	1
IMAG	2600	Cardiac Registry Review	1
IMAG	2630	Cardiac Sonography Clinical Experience III	9
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
<b>Approved Elective options in this semester:</b> <input checked="" type="checkbox"/> n/a Click or tap here to enter text.			
TOTAL SPRING SEMESTER			16
<b>TOTAL PROPOSED PROGRAM CREDITS*</b> *Proposed program represents program courses as detailed above as well as entry prerequisites.			65



## SIGNATURE PAGE

By signing below the Vice President for Academic Affairs verifies that institutional curriculum approval processes have been completed and that the community college Board of Trustees has approved this program request as per institutional policy.

### Submitted by the Vice President for Academic Affairs:

_____	_____
Signature	Date
_____	_____
Printed Name	Title

### Approved by the WCCC Academic Affairs Council:

_____	_____
Signature	Date
_____	_____
Printed Name	Title

### Approved by the Program Review Committee:

_____	_____
Signature	Date
_____	_____
Printed Name	Title

# Wyoming Community College Commission

## NEW PROGRAM REQUEST FORM

<b>College</b>	Laramie County Community College				
<b>Date</b>	April 12, 2022				
<b>Program Title</b>	Echocardiography, Certificate of Completion				
<b>Type of Credential</b>	<input type="checkbox"/> AA	<input type="checkbox"/> AS	<input type="checkbox"/> AFA	<input type="checkbox"/> AAS	<input checked="" type="checkbox"/> Certificate
	<input type="checkbox"/> Other	Click or tap to enter text.			
<b>Total Credit Hours</b>	55 (36 program-specific, 19 pre-requisite and/or required General Education)				
<b>CIP Code</b>	51.0910				
Classification of Instructional Programs/CIP obtained from the National Center for Educational Statistics at <a href="https://nces.ed.gov/ipeds/cipcode/browse.aspx?y=55">https://nces.ed.gov/ipeds/cipcode/browse.aspx?y=55</a> . Double check your recommendation with the course coordinator and/or Student Records.					
<b>Title</b>	Diagnostic Medical Sonographer				

Rationale for request	
<b>Type of Program</b>	<input type="checkbox"/> Transfer preparation <input type="checkbox"/> Short term workforce placement <input type="checkbox"/> One-year workforce placement <input checked="" type="checkbox"/> Special need endorsement
<b>Certificate Questions</b> <i>More than one may apply</i>	<input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b> local or state employer or industry specific <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b> nationally recognized <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b> examination or licensure preparation <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b> practicum <input type="checkbox"/> <b>Yes</b> <input checked="" type="checkbox"/> <b>No</b> stackable  <u>Title IV</u> Financial Aid Eligible <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b> (minimum of 16 semester hours) (Stafford Loans, Perkins Grants, Pell Grants and Federal Campus-based Grants)
<b>New program start</b>	<input type="checkbox"/> NA <b>OR</b> identify the semester the program will start: <b>Fall 2022</b>
<b>Taught by non-accredited vendors?</b>	<input type="checkbox"/> YES (see below) <input checked="" type="checkbox"/> NO  Click or tap to enter text.
<b>WCCC or State Priority</b>	<input checked="" type="checkbox"/> YES (see below) <input type="checkbox"/> NO <i>(See the <a href="#">WCCC website</a>, there are several programs which have a state priority, such as the Governor's Economically Needed Diversity Options for Wyoming/ENDOW</i>  The Healthcare industry has been and remains a significant priority for the State of Wyoming. As early as 2018, the state established a 20-year economic diversification strategy under the ENDOW effort, that established Knowledge and Creative as a next generation engine. This engine includes the healthcare industry. In addition, one of the ENDOW Building Blocks focused on health and quality of life. More recently, the Wyoming Business Council's strategic plan identified Healthcare as one of the first industries under the "Activate New Economic Sectors" component of this plan. The Wyoming Community College Commission's statewide strategic plan 2025 includes two goals relevant to this program: Goal 3 on Program Alignment, and Goal 4 on Economic Development focused on addressing workforce development gaps and supporting programs that align with the state's economic diversification strategies. Currently there are no Echocardiography programs in the state. An acute and growing

	demand for these professionals exists now, especially in SE Wyoming as a result of growing populations and the impacts of the COVID-19 Pandemic.
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Program Curriculum						
Program Description	<p>The echocardiography certificate program is a medical imaging specialization program offered as an extension of the Diagnostic Medical Sonography (DMS) program. The program is an intensive, three-semester program, not including prerequisite courses, and is designed for students who wish to specialize into this area of medical imaging.</p> <p>The echocardiographer (cardiac sonographer) must have an in-depth knowledge of physics, pathophysiology, human anatomy and physiology, and sonographic technique to create diagnostic ultrasound and echocardiographic images. Physicians depend on the echocardiographer's experience to evaluate normal and abnormal anatomy of the cardiac system. Students of this program are eligible to sit for the national certifying exams of the American Registry of Diagnostic Medical Sonographers. Upon passing the Sonography Principles and Instrumentation and the Adult Echocardiography (AE) exams, a student is certified as a registered diagnostic cardiac sonographer (RDCS). Students are also eligible to be certified as a Registered Cardiac Sonography (RCS) by the Cardiovascular Credentialing International (CCI).</p>					
	<p><b>New Curriculum</b>      <input checked="" type="checkbox"/> YES (see below)    <input type="checkbox"/> NO</p> <p><i>List the new courses <b>alphabetically</b>. Include prefix, course number, course title, credit hours. Check the <a href="#">Wyoming Transfer Catalog</a> for possible courses and numbers. Additionally, WCCC has a statewide common course numbering system (CCNS). Colleges must ensure all new courses are aligned with the CCNS. Confirm this alignment with the course coordinator and/or Student Records. Note that CCNS alignment and/or new course title and number requests to the WCCC will take at least a week to process.</i></p>					
College Catalog Considerations (check all that apply)	Prefix	Number	Title	Credits	^ <a href="#">LOI</a>	
<input checked="" type="checkbox"/> New course <input type="checkbox"/> New number <input type="checkbox"/> New prefix <input type="checkbox"/> New title <input checked="" type="checkbox"/> CCNS alignment	IMAG	1560	Cardiac Sonography I	2	3	
<input checked="" type="checkbox"/> New course <input type="checkbox"/> New number <input type="checkbox"/> New prefix <input type="checkbox"/> New title <input checked="" type="checkbox"/> CCNS alignment	IMAG	1561	Cardiac Sonography I Lab	1	3	
<input checked="" type="checkbox"/> New course <input type="checkbox"/> New number <input type="checkbox"/> New prefix <input type="checkbox"/> New title <input checked="" type="checkbox"/> CCNS alignment	IMAG	2615	Cardiac Sonography Clinical Experience I	4	3	
<input checked="" type="checkbox"/> New course <input type="checkbox"/> New number <input type="checkbox"/> New prefix <input type="checkbox"/> New title <input checked="" type="checkbox"/> CCNS alignment	IMAG	2620	Cardiac Sonography Clinical Experience II	5	3	
<input checked="" type="checkbox"/> New course <input type="checkbox"/> New number <input type="checkbox"/> New prefix <input type="checkbox"/> New title <input checked="" type="checkbox"/> CCNS alignment	IMAG	1565	Cardiac Sonography II	2	3	
<input checked="" type="checkbox"/> New course <input type="checkbox"/> New number <input type="checkbox"/> New prefix <input type="checkbox"/> New title <input checked="" type="checkbox"/> CCNS alignment	IMAG	1566	Cardiac Sonography II Lab	1	3	
<input checked="" type="checkbox"/> New course <input type="checkbox"/> New number <input type="checkbox"/> New prefix <input type="checkbox"/> New title <input checked="" type="checkbox"/> CCNS alignment	IMAG	2600	Cardiac Registry Review	1	3	
<input checked="" type="checkbox"/> New course <input type="checkbox"/> New number <input type="checkbox"/> New prefix <input type="checkbox"/> New title <input checked="" type="checkbox"/> CCNS alignment	IMAG	2630	Cardiac Sonography Clinical Experience III	9	3	

Add new rows to this table by clicking the "+" at the end of the row above.

**TOTAL CREDITS** 25

^Course Coordinator can provide.

<b>Similar programs in Wyoming?</b> <a href="#">(See WCCC Program List)</a>	<input type="checkbox"/> <b>Yes (list Colleges below)</b> <input checked="" type="checkbox"/> <b>No</b> Click or tap here to enter text.		
<b>Discussions with other Community Colleges</b>	<input checked="" type="checkbox"/> <b>Yes (see below)</b> <input type="checkbox"/> <b>No (see rationale below)</b> This program and the associated AAS are the result of a \$450,000 WIP Phase I allocation to LCCC. The programs were proposed as stand-alone additions to the Cheyenne campus-based, accredited Diagnostic Medical Sonography program. LCCC's interest in establishing this program has been shared with colleges through the Wyoming Innovation Partnership's Phase I and Phase II planning efforts.		
<b>Additional Resources (faculty, support services, equipment or supplies)</b>	<input checked="" type="checkbox"/> <b>Yes (see below)</b> <input type="checkbox"/> <b>No</b>  <b>STAFFING IMPACT:</b> To meet the Commission on Accreditation of Allied Health Education Programs (CAAHEP) accreditation standards, an instructor certified in Echocardiography is required. There is currently no one on staff at LCCC with this credential.  <b>BUDGET IMPACT:</b> While the program will be able to use the already existing Diagnostic Medical Sonography lab and equipment, there will be minimal equipment and/or instructional supply needs as well as accreditation fees, and advisory support. This, in addition to the anticipated staffing needs will cost approximately \$450,000 for program launch and the first three years of delivery. This figure was used in the initial program proposal and the WIP funding awarded 100% of the request.		
<b>Primary Student Audience</b>	The program is intended to serve currently practicing sonographers and medical imaging professionals who are seeking a short (3-semester) path to advancing in this field. While this is the intended audience as the program launches, we may expand to allow students who've successfully completed the Diagnostic Medical Sonography prerequisites to apply for this program.		
<b>Anticipated three-year unduplicated headcount</b>	<b>Year one:</b> 10	<b>Year two:</b> 10-12	<b>Year three:</b> 16

### Projected Demand Nationally and in Wyoming

(Labor market anticipated demand upon completion of the program and wages for this career field)

Suggested data sources for Occupational Outlook and Wages:

- Career One Stop- [US Department of Labor](#)
- Bureau of Labor Statistics (occupational outlook handbook) <https://www.bls.gov/ooh/>
- Wyoming Labor Market Information (WLMI) <http://doe.state.wy.us/lmi/>

### Projected Demand

Location	Employment			
UNITED STATES	Year 2020	+10 years	Percent Change	Job Openings
	75,900	90,300	19%	7,300

	<b>Data Source:</b> <a href="https://www.careeronestop.org/Toolkit/Careers/Occupations/occupation-profile.aspx?keyword=Diagnostic%20Medical%20Sonographers&amp;onetcode=29203200&amp;location=UNITED%20STATES">https://www.careeronestop.org/Toolkit/Careers/Occupations/occupation-profile.aspx?keyword=Diagnostic%20Medical%20Sonographers&amp;onetcode=29203200&amp;location=UNITED%20STATES</a>
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WYOMING	Employment			
	Year 2018	+10 years	Percent Change	Job Openings
	67	85	26.9%	60
	<b>Data Source:</b> <a href="https://doe.state.wy.us/lmi/projections/2020/Long_Term_2018-28_29.htm">https://doe.state.wy.us/lmi/projections/2020/Long_Term_2018-28_29.htm</a>			

#### State and National Wages

Location	Pay Period	Year Enter 4-digit year.				
		10%	25%	Median	75%	90%
UNITED STATES	Hourly	\$25.86	\$30.30	\$36.50	\$43.72	\$50.65
	Yearly	\$53,790	\$63,020	\$75,920	\$90,940	\$105,340
	<b>Data Source:</b> <a href="https://www.careeronestop.org/Toolkit/StateAndLocal/Wages.aspx?soccode=292032%20&amp;location=UNITED%20STATES&amp;dataview=">https://www.careeronestop.org/Toolkit/StateAndLocal/Wages.aspx?soccode=292032%20&amp;location=UNITED%20STATES&amp;dataview=</a>					

Location	Pay Period	Year 2020				
		10%	25%	Median	75%	90%
WYOMING	Hourly	\$17.60	\$30.28	\$35.77	\$40.58	\$46.70
	Yearly	\$36,610	\$62,980	\$74,410	\$84,400	\$97,140
	<b>Data Source:</b> <a href="https://www.careeronestop.org/Toolkit/StateAndLocal/Wages.aspx?soccode=292032%20&amp;location=UNITED%20STATES&amp;dataview=">https://www.careeronestop.org/Toolkit/StateAndLocal/Wages.aspx?soccode=292032%20&amp;location=UNITED%20STATES&amp;dataview=</a>					

**APPENDIX A- PROGRAM TERM BY TERM PLAN**

Provide the program's term by term plan below

**WCCD PROPOSED PROGRAM OF STUDY FOR: Echocardiography, Certificate of Completion**

<b>RECOMMENDED CURRICULUM SEQUENCE: PROPOSED</b>			
<b>COURSE</b>			
<b>Prefix</b>	<b>Number</b>	<b>Title</b>	<b>Credits</b>
<i>Summer Semester 1<sup>st</sup> Year</i>			
IMAG	1505	Intro to Diagnostic Medical Sonography	3
IMAG	1500	Cross-sectional Anatomy	3
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
<b>Approved Elective options in this semester:</b> <input checked="" type="checkbox"/> n/a			
Click or tap here to enter text.			
<b>TOTAL SUMMER SEMESTER</b>			<b>6</b>
<i>Fall Semester 2<sup>nd</sup> Year</i>			
IMAG	1510	Ultrasound Physics I	2
IMAG	1560	Cardiac Sonography I	2
IMAG	1561	Cardiac Sonography I Lab	1
IMAG	2615	Cardiac Sonography Clinical Experience I	4
IMAG	2620	Cardiac Sonography Clinical Experience II	5
Click or tap here to enter text.	Click or tap here to enter text.	Approved Elective: US/Wyoming Constitution	3
<b>Approved Elective options in this semester:</b> <input checked="" type="checkbox"/> n/a			
ECON 1200 OR HIST 1211 OR HIST 1221 OR HIST 1251 OR POLS 1000			
<b>TOTAL FALL SEMESTER</b>			<b>17</b>
<i>Spring Semester 2<sup>nd</sup> Year</i>			
IMAG	1515	Ultrasound Physics II	3
IMAG	1565	Cardiac Sonography II	2
IMAG	1566	Cardiac Sonography II Lab	1
IMAG	2600	Cardiac Registry Review	1
IMAG	2630	Cardiac Sonography Clinical Experience III	9
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
<b>Approved Elective options in this semester:</b> <input checked="" type="checkbox"/> n/a			
Click or tap here to enter text.			
<b>TOTAL SPRING SEMESTER</b>			<b>16</b>
<b>TOTAL PROPOSED PROGRAM CREDITS*</b>			<b>55</b>
*Proposed program represents program courses as detailed above as well as entry prerequisites.			

## SIGNATURE PAGE

By signing below the Vice President for Academic Affairs verifies that institutional curriculum approval processes have been completed and that the community college Board of Trustees has approved this program request as per institutional policy.

### Submitted by the Vice President for Academic Affairs:

_____	_____
Signature	Date
_____	_____
Printed Name	Title

### Approved by the WCCC Academic Affairs Council:

_____	_____
Signature	Date
_____	_____
Printed Name	Title

### Approved by the Program Review Committee:

_____	_____
Signature	Date
_____	_____
Printed Name	Title