

## Introduction

### Purpose

An effective program review supports continuous quality improvement to enhance student learning outcomes and, ultimately, increase student achievement rates. Program review aims to be a sustainable process that reviews, discusses, and analyzes current practices. The purpose is to encourage program reflection, and to ensure that program planning is related to goals at the institutional and course levels.

### Process

Foothill College academic programs that lead to an A.A./A.S. or Certificate(s), or are part of a specialized pathway, such as ESL, Developmental English and Math My Way are reviewed annually, with an in-depth review occurring on a three-year cycle. The specialized pathways may be included as part of the program review for the department, or may be done as a separate document if they are not part of a department that offers a degree or certificate. Faculty and staff in contributing departments will participate in the process. Deans provide feedback upon completion of the template and will forward the program review on to the next stage of the process, including prioritization at the Vice Presidential level, and at OPC and PaRC.

Annual review will address five core areas, and include a place for comments for the faculty and the dean or director.

1. Data and trend analysis
2. Outcomes assessment
3. Program goals and rationale
4. Program resources and support
5. Program strengths/opportunities for improvement
6. Dean's comments/reflection/next steps

### 2012-2013 Submission Deadline:

- Program review documents are due to Dean by December 14 for completion of Section 6.
- Dean completes section 6 and returns documents to program review team by January 7, 2013.
- Program review documents are due to the Office of Instruction by January 18, 2013.

### Foothill College Program Review Cycle:

To see which template your department is scheduled to complete, check the Program Review Schedule: <http://foothill.edu/staff/irs/programplans/2012-2013/12-13-prog-rev-schedule.pdf>

### Questions?

Contact: Office of Instruction and Institutional Research (650) 949-7240

Website: <http://foothill.edu/staff/irs/programplans/index.php>

**Basic Program Information**

**Department Name: Diagnostic Medical Sonography**

**Program Mission(s):**

The Diagnostic Medical Sonography Program of Foothill College is dedicated to the integration of didactic, laboratory, and clinical objectives with emphasis on the clinical aspect of Diagnostic Medical Sonography. These objectives are designed to successfully develop student's cognitive, psychomotor, and affective domains. The program strives to strengthen its role as a principal community resource by providing this program as well as continuing education to meet individual and collective needs. The program goals include:

1. Graduation of competent entry-level, ARDMS (American Registry of Diagnostic Medical Sonography) board eligible sonographer's.
2. To develop the student's communication and critical thinking skills in order to function as a competent and diligent member of the health care team.
3. To develop technical skills to provide for comprehensive quality care to individuals from a diverse socioeconomic, educational, and or cultural background.
4. To graduate health care professionals who are respectful of others as well as practice the principles of ethics including autonomy, beneficence, nonmaleficence, veracity, justice, fidelity, and recognize his/her responsibilities under the law.
5. To develop the student's awareness and commitment toward understanding and implementing the Code of Conduct & Code of Ethics as described by the Society of Diagnostic Medical Sonography.
6. To convey the importance of striving for continued improvement through education and active participation in this profession.

**Program Scope:**

Foothill College offers an exciting opportunity for practicing diagnostic medical sonographer's who need formalized education to pass the sonography registry, and for those in recognized American Medical Association Allied Health occupations who wish to specialize in diagnostic medical sonography.

This 18-month certificate program consists of didactic and clinical preceptorship experience. This program will prepare students for the American Registry of Diagnostic Medical Sonographer's (ARDMS) examinations.

Formal academic and clinical lab course work is presented by experienced practicing sonographer's and other health science professionals. Emphasis is placed on physics of ultrasound, abdominal applications, superficial structures, obstetrics and gynecology, and vascular sonography.

Course work is enhanced while assigned for clinical preceptorship where the student must master clinical competency via hands-on experience under the supervision of practicing sonographer's.

**Additional Information:**

The DMS Program has been in operation since 1984 and is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS), and the college with the Western Association of Schools and Colleges.

Instruction begins in September and completes in March eighteen months later. All courses are completed in sequence. The preceptorship (clinical) courses require thirty-two hours per week. Didactic and clinical laboratory instruction is in addition to preceptorship assignment. Students are eligible to take the American Registry of Diagnostic Medical Sonographers (ARDMS) examinations in the concentrations of

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Ultrasound Physics, Abdominal Subjects, Obstetrics and Gynecology, and Vascular Physics. Students, pending additional competencies, will be eligible for specialties examinations for Breast Sonography, Neurosonography, and Vascular Technology. The DMS program leads to a Certificate of Achievement and can lead to an Associate in Science degree. The curriculum is presented in six quarters.

### Career Opportunities

Students typically pursue technical careers in the hospital, clinic, and office. With additional technical experience career positions may include supervisory positions and as a traveler or independent contractor. Most management, corporate, and education positions require four-year college degrees in a related field.

#### Program Review team members:

Name	Department	Position
Kathleen Austin	Biology & Health Science	Director

Total number of Full Time Faculty:	1, the Director
Total number of Part Time Faculty:	5

#### Existing Classified positions:

Example: Administrative Assistant I

Example: Program Coordinator 1 PT included in the number of Part Time Faculty above

#### Programs\* covered by this review

Program Name	Program Type (A.S., C.A., Pathway, etc.)	Units**
Diagnostic Medical Sonography	Associate of Science and/or Certificate of Achievement	96

\*If you have a supporting program or pathway in your area for which you will be making resource requests, please analyze it within this program review. For example, ESLL, Math My Way, etc. You will only need to address those data elements that apply.

\*\*Certificates of 27 or more units must be state approved (transcriptable). A Certificate of Achievement is state approved (transcriptable).

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### Section 1. Data and Trend Analysis

#### 1.1. Program Data:

Data will be posted on <http://foothill.edu/staff/irs/programplans/programreviewdata.php> for all measures except non-transcriptable completion. Please attach all applicable data sheets to the final Program Review document submitted to your Dean. You may use the boxes below to manually copy data if desired.

Transcriptable Programs	2009-2010	2010-2011	2011-2012	% Change
Example: A.S Degree	13	14	16	13
Example: Certificate of Achievement	18	18	17	5.6

Please provide any non-transcriptable completion data you have available. Institutional Research does not track this data.

Non-Transcriptable Program	2009-2010	2010-2011	2011-2012	% Change
Example: Career Certificate	0	0	0	0

#### 1.2 Department Data

Dimension	2009-2010	2010-2011	2011-2012	% Change
Enrollment	18	18	17	
Productivity (Goal: 546)	696	703	684	
Success	100%	100%	100%	
Full-time FTEF	1	1	1	
Part-time FTEF		1.5	1.6	

Department Course Data (Attach data provided by IR or manually complete chart below)

Course	2009-2010			2010-2011			2011-2012		
	Enroll.	Prod.	Success	Enroll.	Prod.	Success	Enroll.	Prod.	Success
See attached PR Data Sheets									
Ex. ART 1									

1.3 Using the data and prompts, provide a short, concise narrative analysis of the following indicators.

- ⊕ For 2010-2011 institutional research data had numerous errors with the report. I attached data showing the errors at that time. The error rate was significant and reoccurring.

1. Enrollment trends over the last three years: Is the enrollment in your program holding steady, or is there a noticeable increase or decline? Please comment on the data and analyze the trends.

- ⊕ In **2009-2010 & 2010-2011** the DMS program morphed into an 18-month program which created a unique new set of logistical issues. Given the need to meet employers

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expectations there was no alternative but to extend the length of the program. This means the maximum of students accepted into the DMS program each year was slightly fewer but overall given new 2 quarter overlap of both classes the numbers of student per year increased. A greater number of hospitals are needed as clinical education partners. Many hospitals *could not or would not* allow for additional students. The results have been an acknowledged higher vs. lower enrollment in alternating years. This is expected and not a result of declining interest or qualified applicants.

- ⊕ In **2011-2012** the DMS program graduated the same number of students as prior years. Many hospitals *could not or would not* allow for additional students. Thus enrollment in in alternating years move up/down slightly. This is expected and not a result of declining interest or qualified applicants.
- ⊕
  - 2. Completion Rates (Has the number of students completing degrees/certificates held steady, or increased or declined in the last three years? Please comment on the data and analyze the trends.
    - a. AA, AS, AA-T, AS-T, Certificates of Achievement
      - ⊕ 2009-2010: 13/18 (73%) received the Associate degree in Diagnostic Medical Sonography. 18/18 (100%) received the Certificate of Achievement in Diagnostic Medical Sonography. Three students were foreign trained physicians with no interest to complete the GE requirements for the AS degree.
      - ⊕ 2010-2011: 14/18 (78%) received the Associate degree in Diagnostic Medical Sonography. 18/18 (100%) received the Certificate of Achievement in Diagnostic Medical Sonography. Three students were foreign trained physicians with no interest to complete the GE requirements for the AS degree.
      - ⊕ 2011-2012: 16/17 (94%) received the Associate degree in Diagnostic Medical Sonography. 17/17 (100%) received the Certificate of Achievement in Diagnostic Medical Sonography. Three students were foreign trained physicians with no interest to complete the GE requirements for the AS degree.
      - ⊕ All DMS students complete the program with the Certificate of Achievement. The number of AS degrees in DMS has *increased*. Those receiving the AS degree could be higher if the State of California implemented reciprocity between all schools for the GE package. The number of AS degrees is influenced by the number of foreign trained physicians enrolled as they 1) would need to complete the GE package and 2) have **no interest** nor would experience a benefit from doing so.
    - b. Local, non-State approved certificates- Certificates less than 27 units: All certificates less than 27 units without state approval should be reviewed carefully to determine if the certificate provides a tangible occupational benefit to the student, such as a job or promotion or higher salary, and documentation should be attached.
      - ⊕ NA

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3. Productivity: Please analyze the productivity trends in your program and explain factors that affect your productivity, i.e. GE students, seat count/facilities/accreditation restrictions. For reference, the college productivity goal is 546.
  - ⊕ Size restriction has been a factor as the number of students selected is relevant to the number of students the educational training partners are willing to place in clinical facilities. With the 1:1 ratio and few facilities are able to increase the student numbers per site. Thus one year will be an increase in student numbers and the next a slight decrease. This is expected given the logistics. Productivity exceeds the college goal. In 2010-11 = 703 and 2011-12 = 684.
  - ⊕ The DMS Program has the ability to expand and contract, within reason, to match market demands. The DMS program is a responsible partner with the educational education partners and community to meet market demands that requires clinical competency and job skills unique to this profession. The number of students assigned to the campus lab respective to instructor/equipment ratio guides the number of students accepted. The ratio of faculty to student is an accreditation requirement.
4. Course Offerings: (Comment on the frequency, variety, demand, pre-requisites.) Review the enrollment trends by course. Are there particular courses that are not getting the enrollment or are regularly cancelled due to low enrollment?
  - a. Please comment on the data from any online course offerings.
    - ⊕ Not applicable as the prerequisite background for admittance must be met prior to submission of application. The DMS program uses a selective admissions process.
5. Curriculum and Student Learning Outcomes (SLOs)
  - a. Comment on the currency of your curriculum, i.e. are all Course Outline of Record (CORs) reviewed for Title 5 compliance at least every three years and do all prerequisites, co-requisites and advisories undergo content review at that time? If not, what is your action plan for bringing your curriculum into compliance?
    - ⊕ All CORs are current and meet Title 5.
    - b. Comment on any recent developments in your discipline which might require modification of existing curriculum and/or the development of new curriculum?
      - ⊕ During 2012 some of the curriculum will be addressed to respond to the elimination of Directed Studies courses. This will have a modest impact on productivity.
    - c. Discuss how the student learning outcomes in your courses relate to the program learning outcomes and to the college mission.
      - ⊕ As a medical program focusing on obtaining the diagnostic information needed to diagnose a patients' condition in order for the patient to receive treatment or the next level of care the DMS program absolutely addresses the college mission statement. The DMS program is active with career preparation, transfer, and career education. It aligns with all of the PLO's for communication, computation, creative, critical and analytical thinking, as well as community and global consciousness and responsibility. There is an alignment with the SLO's.
      - ⊕ The DMS Program is consistent with the college mission in that it provides student centered educational opportunity leading to a profession. It incorporates accountability and partnership. Student learning and achievement are measured

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through a variety of methods including national examinations. It adheres to **competency based** instruction. Furthermore, a close relationship exists with the educational training partners (hospitals and medical facilities) leading to a strong partnership with employers. Ongoing assessment and continued reassessment takes place to ensure graduates are competent and possess the skills including cognitive, psychomotor, and affective as evidenced by examination and employer, and graduate surveys. The goals align with the institution goals to deliver high quality programs, assessment of program effectiveness and to upgrade the program, capital equipment, support materials in order to meet employers and industry need.

- ⊕ Students have a diverse background culturally, socioeconomically, gender, and ethnic backgrounds. Nearly 40 % of the each class align to the description of targeted groups with the success rate in 2010-2011 as 99% and success for 2011-2012 at 95%.
- d. As a division, how do you ensure that all faculty are teaching to the COR and SLOs?
  - ⊕ This is a question for the Division Dean and not faculty if as stated it refers to the division as a whole and all faculty.
- 6. Basic Skills Programs (if applicable). For more information about the Core Mission of Basic Skills, see the Basic Skills Workgroup website: <http://foothill.edu/president/basicskills.php>
  - a. Please discuss current outcomes or initiatives related to this core mission.
    - ⊕ Prior to entry into the Diagnostic Medical Sonography program student must have completed another Allied Health program and may have included basic skills programs. Thus these Allied Health Education programs are feeders into the DMS program.
- 7. Transfer Programs (if applicable). For more information about the Core Mission of Transfer, see the Transfer Workgroup website: <http://foothill.edu/president/transfer.php>
  - a. Please discuss current outcomes or initiatives related to this core mission.
    - ⊕ Some coursework is transferable.
- 8. Workforce/Career Technical Education Programs (if applicable). For more information about the Core Mission of Workforce, see the Workforce Workgroup website: <http://foothill.edu/president/workforce.php>
  - a. Please discuss current outcomes or initiatives related to this core mission.
  - b. Please attach minutes from your advisory board meeting(s).
  - ⊕ The DMS program is a targeted profession with an optimistic future growth projection. A recent study indicated the need for registered sonographers to represent an 18% growth for the next 10 years.

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Annual reports are submitted to the DMS programs accreditation agency (CAAHEP) Commission on Accreditation of Allied Health Education Programs. Included in the report are employer and graduate surveys. The results dating back many years continue to be complimentary. Both graduates and employers enthusiastically commend the DMS program and state a high level of satisfaction.

An Advisory Committee helps to guide the DMS program toward its ability to stay on the “cutting edge” in order to meet labor needs. Clinical education partners (industry) meet to analyze and make recommendations toward future curriculum changes.

9. Student Equity: Foothill-De Anza Community College District Board policy and California state guidelines require that each California community college submit a report on the college’s progress in achieving equity in five specific areas: access, course completion, ESLL and basic skills completion, degree and certificate completion, and transfer. For the latest draft of the Student Equity Report, please see the ESMP website:  
<http://foothill.edu/staff/irs/ESMP/index.php>
  - a. To better inform the Student Equity efforts at Foothill College, please comment on any current outcomes or initiatives related to increasing outreach, retention and student success of underrepresented students in your program.
    - + Outreach is directed toward feeder schools of of second year Allied Health students. Nearly all have a well diversified population.

### Section 2. Learning Outcomes Assessment Summary

2.1. Attach 2011-2012 Program Level – Four Column Report for PL-SLO Assessment from TracDat, please contact the Office of Instruction to assist you with this step if needed.

**Section 2 Continued: SLO Assessment and Reflection**

2.3 Please provide observations and reflection below.

**2.3.a Course-Level SLO**

**1. What findings can be gathered from the Course Level Assessments?**

The DMS courses are relevant. All courses are of sufficient substance and rigor to ensure a highly trained qualified health care professional. For many years the DMS program has engaged in course level assessments. This has been done even prior to implementation of Program Review.

**2. What curricular changes or review do the data suggest in order for students to be more successful in completing the program?**

The coursework and sequence suggest the DMS program is right on target to meet employer's needs. Graduates enjoy a high degree success on the national board examinations. Data acquired for program accreditation and outside of the program review process demonstrates that graduates meet or exceed employer needs.

**3. How well do the CL-SLOs reflect the knowledge, skills, and abilities students need in order to succeed in this program?**

There has not been a need to make any changes to program courses. The CL-SLO's reflect the end of a process learned and applied CL-SLO's.

**4. How has assessment of course-level student learning outcomes led to improvement in student learning in the program?**

There has not been a need to make any changes to any of the program courses.

**5. If your program has other outcomes assessments at the course level, comment on the findings.**

Surveys are conducted for course assessment including the clinical preceptorship and overall program assessment. Outcomes from these assessments are consistently very good. See page 33.

**2.3.b Program-Level SLO**

**1. What summative findings can be gathered from the Program Level Assessments?**

The DMS Program Level Assessments are relevant. The program has sufficient substance and rigor to ensure a well-trained qualified health care professional.

**2. How has assessment of program-level student learning outcomes led to certificate/degree program improvements?**

The assessment of program-level student learning outcomes has not led to program improvements other than keeping current with the profession. Instead it validates what is already a quality program. The increase in the number of AS degrees issued is linked to the fact more incoming students have a higher level of college education including the BS & MS degrees. In 2011-2012 66% of incoming students have a BS/BS degree and 23% were previously granted 1-3 AA/AS degrees. The three who did not are medical doctors from Pakistan, India, and China.

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3. If your program has other outcomes assessments at the program level, comment on the findings.

- Employer Surveys  
**Score: 4.80 out of 5.0**
- Graduate Surveys  
**Score: 4.86 out of 5.0**
- Course Assessment by Student: overwhelmingly very satisfied
- Course Assessment by Faculty: feels courses are on target to meet employer needs; constantly reassessing for improvement
- Clinical Preceptorship Site Evaluation by Student: very satisfied to satisfied; some desire more time with MD's
- Clinical Preceptorship Site Evaluation of Student by Faculty: ongoing assessment with the majority performing good to excellent, very few with deficits
- ARDMS Board Exam Pass Rates (100% X's past 5 years) & (95-100% x's previous 25 yrs)
- Program Assessment by Students: 95-100% satisfied
- Annual Reports to CAAHEP with assessment info: surpassing thresholds
- Resource Assessment to Accreditation Agency by Students (of Program Faculty, Physical, Learning Resources, Clinical Resources, MD Interaction)  
**Scores: 4.84 out of 5.0**
- Resource Assessment to Accreditation Agency by Clinical Preceptors (of Program Faculty, Physical, Learning Resources, Clinical Resources, MD Interaction)  
**Scores: 4.68 out of 5.0**
- Resource Assessment to Accreditation Agency by Advisory Board, MD, Faculty (of Program Faculty, Physical, Learning Resources, Clinical Resources, MD Interaction)  
**Score: 4.66 out of 5.0**
- Exit Interviews: overall program performing to expectations, occasional comments about too much homework, program is impacted.

### Section 3: Program Goals and Rationale

Program goals should be broad issues and concerns that incorporate some sort of measurable action and should connect to Foothill's core missions, [Educational & Strategic Master Plan \(ESMP\)](#), the division plan, and SLOs.

#### 3.1 Previous Program Goals from last academic year

The DMS program is active with career preparation, transfer, and career education. It aligns with all of the COR's as communication, computation, creative, critical, and analytical thinking, as well as community/global consciousness and responsibility.

Goal	Original Timeline	Actions Taken	Status/Modifications
<b>1 CAAHEP accreditation site visit</b>	January 2011	Site team visited	Accreditation site visit report was excellent.
<b>2 Abdomen Phantom</b>	2011	Purchased	Completed
<b>3 Director Release Time of 50%</b>	2011	None	No action taken
<b>4 Replace Med Sim Simulation Trainer within 3 yrs</b>	2013	Placed as a goal	No action at this time
<b>5 Software upgrades within 3 years</b>	2013	None	No action at this time
<b>6 Additional clerical support</b>	2011	Requested as part of division	Denied
<b>7. Update library resources</b>	ongoing	None	Lack of library funds
<b>8. Evaluator for Allied Health Science to assist with transcript eval and all other division</b>	2011	None	Declined
<b>9. Replacement of outdated US equipment</b>	To begin in 2014 and ongoing as equipment becomes dated	None	None at this time.
<b>10. Professional Development</b>	2012-2013	Approved	Completed for 2012.
<b>11. Purchase AV support &amp; Supplies</b>	ongoing	Perkins declined budget for purchase	Incomplete
<b>12. Funding for faculty development, Clinical Instructor's meetings, and Advisory Board meetings.</b>	ongoing	Declined citing budget problems	Incomplete

**Annual Instructional Program Review Template for 2012-2013**

3.2 New Goals: Goals can be multi-year (in Section 4 you will detail resources needed)

<b>Goal</b>	<b>Timeline (long/short-term)</b>	<b>How will this goal improve student success or respond to other key college initiatives</b>	<b>Action Steps</b>
<b>1. Augment B-budget</b>	Immediate and in the future and sustainable budget for future years.	The DMS program has not received any budget money for the past 2 years. <i>0 funding for 2 year's along with budget reductions</i> has reduced operating budget below reasonable levels. At this time is not meeting the minimum need.	Requesting immediate augmentation
<b>2. Professional Development</b>	For 2012-2013	To maintain professional credentials along with bringing up to date instruction to the classroom Compliance with ARDMS (American Registry of Diagnostic Medical Sonography) Professional credentials and CME (continuing medical education) mandates. Supports Strategic Initiative 1: Student success Supports Strategic Initiative 2: Community & Collaboration	Will also apply to Perkins.
<b>3. Purchase AV support and supplies necessary for learning.</b>	For 2012-2013	Supports students learning & career preparation Supports Strategic Initiative 1: Student success Supports Strategic Initiative 2: Community collaboration Supports Strategic Initiative 3: Nontraditional outreach	Will also apply to Perkins.
<b>4. Purchase large screen TV for the lab and mount on the wall in order for students to view US examinations. Now the students crowd around the patient and try to watch live exam on the 14" monitor and peeking around the operator's body/head.</b>	2013	Career preparation/education.	Will apply to Perkins though doubtful will obtain funding
<b>5. Replacement of outdated US equipment and transducers.</b>	Estimate 3-4 years for first system and 5-6 years for 2 additional systems.	Career preparation/education. To meet patient's needs.	Continue to keep on PR list
<b>6 Replace Med Sim Simulation Trainer</b>	Part of last year's Program Summary	Meets student success as per college Mission and the COR's.	Continue to keep on PR list

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<b>within 3 years</b>	of Planning Goals & Action Plans.		
<b>7. Software upgrades within 3 years</b>	By 2013 Part of last year's Program Summary of Planning Goals & Action Plans.	Meets student success as per college Mission and the COR's.	Continue to keep on PR list
<b>8. Continue to seek additional clerical support and many more.....</b>	Part of last year's Program Summary of Planning Goals & Action Plans.		Continue to keep on PR list
<b>9. Update library resources.</b>	Ongoing Part of last year's Program Summary of Planning Goals & Action Plans.		Continue to keep on PR list
<b>10. Evaluator for Allied Health Science</b>	Part of last year's Program Summary of Planning Goals & Action Plans.		Request noted on program review
<b>11. Funding for faculty development, Clinical Instructor's meetings, and Advisory Board meetings.</b>	The ARDMS mandates 36 hours of CME's completed in a triennium. Clinical instructor meetings and advisory board meetings are held on campus in the evening hours to accommodate the work schedule of its members.	Supports students learning & career preparation Supports Strategic Initiative 1: Student success Supports Strategic Initiative 2: Community collaboration	Continue to keep on PR list

Draft Annual Program Review Template for 2011-2012

**Section 4: Program Resources and Support**

4.1 Using the tables below, summarize your program's new, unfunded resource requests. Refer to the Operations Planning Committee website: <http://foothill.edu/president/operations.php> for current guiding principles, rubrics and resource allocation information.

**Full Time Faculty and/or Staff Positions**

Position	\$ Amount	Related Goal from Table in section 3.2 and/or rationale
<b>No requests for additional full time faculty or support staff at this time.</b>		

**Unbudgeted Reassigned Time (calculate by % reassign time x salary/benefits of FT)**

Position	\$ Amount	Related Goal from Table in section 3.2 and/or rationale
<b>Seek Director release time of 50%.</b>	As per established salary.	Part of last year's Program Summary of Planning Goals & Action Plans. Program Director is full time classroom instructor, plus clinical site visitor, and administrator. A considerable amount of administrative work and classroom prep/research work is conducted on most weekends.

**One-time B Budget Augmentation**

Description	\$ Amount	Related Goal from Table in section 3.2 and/or rationale
<b>B Budget Augmentation</b>	<i>Request immediate and urgent augmentation</i> of \$2,500 for 2011-2012.	<i>The DMS program received 0 funding for 2010-2011 and 2011-2012 resulting in a deficit for 2012. With the additional B-budget reductions this year the dollars no longer supports the minimal operating costs to support the program, its students, and basic operational costs or comply with accreditation mandates for sufficient funding. There is no money for equipment repairs and at times no money for supplies to run the program. The director spends personal funds to support the program especially when urgently needed items must be purchased.</i> <b>The director is not requesting backfill for personal funds spent but the statement is to indicate the augmentation need.</b>
<b>CAAHEP accreditation annual fee. (\$1,200 per yr.)</b>	Ongoing mandated accreditation fee is \$1,200 per yr.	Required by CAAHEP accreditation agency.

Draft Annual Program Review Template for 2011-2012

Ongoing B Budget Augmentation

B Budget FOAP	\$ Amount	Related Goal from Table in section 3.2 and/or rationale
<b>1. Augment B-budget</b>	Restore to adequate annual funding of \$6-8,000/yr.	The DMS program did not receive any budget money for the past 2 years. <i>0 funding for 2 year's along with budget reductions</i> has reduced operating budget below minimum and reasonable levels to support operating costs. It is insufficient to support this program, its students, and operational costs or comply with accreditation mandates for sufficient funding. The annual report to the JRC-DMS asks this same question. There is no set aside money for equipment repairs and at times no money for supplies to run the program.
<b>2. CAAHEP accreditation annual fee. (\$1,200 per yr.)</b>	Ongoing mandated accreditation fee is \$1,200 per yr.	Required by CAAHEP accreditation agency.
<b>3. Professional Development</b>	\$6,000. per year for all instructor's	Will apply to Perkins as well.
<b>4. Purchase AV support and supplies necessary for learning.</b>	\$2,500 per year	DVD's, simulation tools, software for board exam preparation, including replacement of outdated items, etc. are an integral part of quality instruction.
<b>5. Funding for Clinical Instructor's and Advisory Board meetings.</b>	\$ 750. per year	Does not qualify for Perkin's, must be B-budget funded. Meetings are required by accreditation.

Facilities and Equipment

Facilities/Equipment Description	\$ Amount	Related Goal from Table in section 3.2 and/or rationale
<b>1. Purchase large screen TV for the lab and wall mounted.</b>	\$5,000.00	Students crowd around the patient and try to watch live exam on the 14 inch monitor by standing over the patient and jockeying around the operator's body/head to view.
<b>2. Periodic replacement of outdated sonography equipment. First replacement system within 3-4 years. Others to follow.</b>	\$160,000 per system x's 5 systems.	Equipment needs to be replaced and updated on a regular basis to provide for the level of instruction required by employers. Requests will be made from Perkin's or any future bond issuance.
<b>3. Equipment transducers as they are developed.</b>	\$18,000 each.	Requests will be made from Perkin's or any future bond issuance.
<b>4. Lab Computers as replacement.</b>	At current district costs	Is supposed to be on current replacement list though this may not happen. Then the 3 lab computers for student learning will need to be replaced to accommodate the newer learning programs.

**Section 5: Program Strengths/Opportunities for Improvement**

5.1 Address the concerns or recommendations that were made in prior program review cycles.

There were no concerns or recommendations made.

5.2 What statements of concern have been raised in the course of conducting the program review by faculty, administrators, students, or by any member of the program review team regarding overall program viability?

Concerns include the lack of sufficient financial support and the number of job responsibilities for the director including a growing amount of administrative tasks. Numerous projects are imposed on the director's without the support of adequate release time.

5.3 After reviewing the data, what strengths or positive trends would you like to highlight about your program?

	<b>INTERNAL FACTORS</b>	<b>EXTERNAL FACTORS</b>
<b>Strengths</b>	<p>Strength is the mandated ratio of one student per hospital AKA clinical education partner. The student receives a great deal of clinical opportunity.</p> <p>Part-time instructors are some of the best leaders in this field and bring a great deal of expertise and currency to the classroom.</p> <p>The Diagnostic Medical Sonography Program is a medical profession using all senses including hand eye coordination, spatial recognition skills, all levels of communication skills, patient care and assessment skills, analytical thinking, critical thinking, understand disease and locate its presence in the human body and to alter the examination to reach a diagnosis.</p> <p>Learning includes but is not exclusive to critical thinking, analytical thinking, dexterity, spatial recognition, patient assessment, intervention in critical situations, the operating room, patient bedside and employed in numerous delivery settings.</p> <p>Students receive information from lecture, campus hands-on labs, practicing on student models, a variety of multimedia including CD/DVD's, actual</p>	<p>Part time instructors work for their primary employers (hospitals) and are not able to participate with the online course development (ETUDES), curriculum development, filing of grades, class setup bookorders, etc. All of this and more is completed by the program director adding to the workload of the program director.</p> <p>All DMS students have fulfilled the successful completion of a prior Allied Health profession of which the core program was a minimum of 2 years and/or a BS degree in a science (ex premed). General education courses have been completed in 94% of applicants. The remaining is advised to complete the outstanding coursework prior to entry. Approximately 40-60% of students have a BS degree or higher, remainder of the students holds 1-3 AS degrees prior to entry.</p> <p>There are many ways to measure the goals and objectives of the DMS Program. Given the goals of the program must meet accreditation standards of the Joint Review Committee for Diagnostic Medical Sonography under CAAHEP (Commission of Accreditation for Allied Health Education Programs). There are additional methods to measure goals including outcomes on the National Board</p>

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	<p>performance with patients in a clinical setting, integration of phantom and simulation training.</p> <p>Ongoing Advisory Board meetings with membership consists of the medical administrators, faculty, industry experts, etc. advise the DMS program with the trends and employer needs.</p> <p>Ongoing Clinical Instructor's meetings are vital to know the direction of the profession and to assist with short and long range strategic planning.</p> <p>DMS faculty attends conferences to further gain understanding of the trends. All ARDMS/RVT faculties are members of the SDMS (Society of Diagnostic Medical Sonography).</p> <p>Ongoing communication with industry and manufacturing keeps the DMS program current with the changing job market.</p> <p>Attending professional conferences allows faculty to remain current in this profession as well as to bring back cutting edge changes to the profession.</p> <p>Strength include the annual surveys from graduates, employers, clinical instructors and faculty which in turn facilitate change or modification of courses leading to a better prepared professional for the workforce.</p> <p>The DMS program requires an Allied Health degree or BS degree in a science such as the premed student. The applicant may also have the AS degree in the Allied Health Programs such as Radiology Technology, Respiratory Therapy Programs, etc. At FC the applicant has completed the general education courses. Applicants from FC have completed prior coursework thus contributing to the district and college in terms of productivity.</p>	<p>Examinations under the ARDMS (American Registry of Diagnostic Medical Sonography). SLO's are measurable.</p> <p><i>The DMS program exceeds national scores for board examinations and has high employer and graduate satisfaction rate.</i></p> <p><i>In order to continue this excellent level of instruction and preparedness then ongoing sufficient funding and program support is needed.</i></p> <p><b>2012 data:</b>  <i>The ARDMS National Board The Class of 2011 pass rate was 100%.</i></p> <p><i>Graduate Surveys in all categories which include Cognitive Domain, Psychomotor Domain, and Affective Domain scored 4.86 out of 5.</i></p> <p><i>Employer Surveys in all categories was which includes Cognitive Domain, Psychomotor Domain, and Affective Domain scored 4.80 out of 5.</i></p> <p><i>Resource Assessment by Students:</i>  <i>4.84 out of 5.0</i></p> <p><i>Resource Assessment by Clinical Preceptor's, site MD's, Management:</i>  <i>4.68 out of 5.0</i></p> <p><i>Resource Assessment by Faculty, Advisory Committee, MD advisor:</i>  <i>4.66 out of 5.0</i></p> <p>Most graduates gain employment immediately after graduation with a few becoming employed within 60 days in spite of the tight job markets in many other fields.</p>
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	<p>The prerequisites are appropriate leading to success with the ARDMS national board examination requirements for Prerequisite 2 qualification and the JRC-DMS standards. Retention rates, graduation rates, ARDMS board exam success rates are excellent and therefore it is validated the prerequisites are valid and sufficient at this time.</p> <p>Strength is to align with the guiding principle to keep the Diagnostic Medical Sonography Program vital and energized with the ability to produce competent job ready sonographer's with "cutting edge" experiences and competencies. It is not enough to prepare the graduate for the job market which only addresses a narrow perspective of the profession or only trains for the user with limited needs or patient complications. It is our goal to train for the "high end" employer where patient's medical needs and complications are substantial. Through feedback from surveys from employers and graduate surveys we will continue to know what is working and where modifications are needed.</p> <p><i>The ability to meet employment needs and requirements as determined by the employer, graduate and JRC-DMS.</i></p> <p><i>Outcomes assessment</i></p> <ol style="list-style-type: none"> <li>1. <i>National Board Exam scores with the ARDMS</i></li> <li>2. <i>Graduate Surveys</i></li> <li>3. <i>Employer Surveys</i></li> <li>4. <i>Numerous other surveys as cited on page 31 of this report.</i></li> </ol>	
<b>Opportunities</b>	<p>With additional funding enlarging on the distance learning model would be advantageous.</p>	<p>Ideally a community college would partner for distance learning facility without requesting funding from the college. This may come from start up funding sources such as Perkins or from industry. The benefit to the school and community is to meet community workforce demand.</p>
<b>Positive Trends</b>	<p>While the Report by EMSI has included data which is <b>not correct</b> as it cites businesses which are not recognized by the national accreditation of CAAHEP or the national registration body ARDMS it</p>	<p><b>EMSI</b> report listed two businesses which are/were private businesses neither are CAAHEP accredited and offer little to no prospects for job skills and to qualify applicants for the board exams to practice.</p>

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	<p>does point out the need for employees in this profession. Thus FC as one of the two accredited DMS programs in northern California and the only one in the local region. It is educating a higher level of professional's including those with advanced degrees completing the DMS program. As a strength this will position the graduates and the program when the day arrives when DMS graduates will need a BS degree and license to practice.</p>	<p>One has been shut down by the State of California.</p> <p>Externally we anticipate that Hospitals, outpatient clinics and individual/group medical practices will expand correlating to a growth in employment. This is coupled with a more rapid expectation of retirements of the existing workforce. The professional body is advocating the need for the baccalaureate degree as the minimum for this profession. 74% of the 2012 entering class already has a BS or higher degree. The remainder of the class entered with 1-3 AS degrees.</p>
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### **Section 6: Feedback and Follow Up**

This section is for the Dean to provide feedback.

#### **6.1 Strengths and successes of the program as evidenced by the data and analysis:**

The DMS Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS), and the college with the Western Association of Schools and Colleges.

The 18 month program consists of classwork and extensive clinical preceptorship taught by faculty including highly regarding working professionals in the DMS community.

Results from surveys of recently graduated students and employers of those students demonstrated very high satisfaction with the program and their training. Resource assessment to accreditation agency by students, clinical preceptor and advisory board were all >4.5 out of 5 when questioned about program faculty, learning resources, clinical resources and MD interactions.

#### **6.2 Areas of concern, if any:**

Clearly the program director has developed an excellent and highly regarded program with minimal administrative support. The director has a full teaching load while overseeing the community outreach, online class preparation, monitoring and maintenance. Furthermore, significant time is required to coordinate the mandated ratio of one student per hospital.

#### **6.3 Recommendations for improvement:**

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### 6.4 Recommended next steps:

- Proceed as planned on program review schedule
- Further review/Out of cycle in-depth review

Upon completion of section 6, the Program Review should be returned to department faculty and staff for review, then submitted to Instruction and Institutional Research for public posting. See timeline on page 1.

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### FOOTHILL COLLEGE DMS ADVISORY BOARD COMMITTEE MEETING MINUTES

**April 17, 2012**

Dr. Volney Van Dalsem	Medical Director, Radiologic Technology Program & Outpatient Imaging Services, Stanford
John Mummert	V.P. of Career and Workforce Education, Foothill College
Phyllis Sprague	Dean, Biological & Health Sciences Div., Foothill College
Bonny Wheeler	Prog. Director, Radiologic Technology Program, Foothill College
Jenene Key	Faculty, Radiologic Technology Program, Foothill College
Rachelle Campbell	Clinical Coordinator, Radiologic Technology Prog., Foothill College
Joni Schott	Administrative Director, Stanford Hospitals & Clinics
Archana Nandan	Director, Imaging Services, Palo Alto Med. Foundation, M.V.
Gloria Varey	Clinical Instructor, Imaging Services, Good Samaritan Hospital
Chris DeMaggio	Supervisor, Imaging Services, Hazel Hawkins Memorial Hospital
Dianne Tiernan	Director, Imaging Services, Santa Clara Valley Medical Center
Patty Smith	Interim Director, Imaging Services, El Camino Hospital
Laurie Holderman	Chief Tech/Clinical Instructor, El Camino Hospital
Donny DeLeon	Ass't. Director, Diagnostic Imaging, Kaiser Santa Clara
Cindy Borges	Clinical Instructor, Imaging Services, O'Connor Hospital
Angela Hurlburt	Sonography Supervisor, Imaging Services, PAMF - Palo Alto
Sheila Sargent	Chief Tech/Clinical Instructor, Valley Radiology Medical Associates
Cliff Conover	1 <sup>st</sup> Year Student Representative, Foothill College RT Program
Marichu Orillaneda	2 <sup>nd</sup> Year Student Representative, Foothill College RT Program
Wendy Brown	2 <sup>nd</sup> Year Student Representative, Foothill College DMS Program
Jennifer Miller	1 <sup>st</sup> Year Student Representative, Foothill College DMS Program
Kerry West	Health Career Coordinator - Foothill College

Bonny Wheeler called the meeting to order at 12:20 P.M.

#### **I. Graduates & Employment Trends**

**2011:** 18 graduated. 16 employed (14 full-time, 2 PT), 1 not employed.  
**2012 :**17 students graduated end of March 2012. At 30 days 12 employed (10 FT/2 PT, 1 pregnant and not looking, 1 relocating out of state, 3 unknown.

#### **II. ARDMS Results for 2011 (American Registry of Diagnostic Medical Sonography)**

National Pass Rate ('11 Stats)	<b>FC DMS Program Class of 2011</b>
Physics	75% ↑ 8% 100%
Abdomen	60% ↑ 10% 100%
Ob-Gyn	73% ↑ 6% 100% * one has not taken this exam
Vascular Technology	58% ↑ 5%
Breast Sonography	77% ↑ 3%
Neurosonography	73% ↑ 13%

Development is underway for a new ARDMS exam: Musculoskeletal Sonography Begins Fall 2012.

#### **III. Current Class Information**

Accepted: 20 / Currently enrolled:19. (One WD prior to termination.)  
Non-RT student: 9 (44%)  
Average number of college units completed ***prior to*** entrance to the DMS program for 2011 & 2012: ***179 SU***.  
Average GPA of all ***prior*** college coursework completed for 2011 and 2012: ***3.32***

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**IV.** The DMS program requested funding for the purchase of a scannable abdominal phantom with pathology that can be used for traditional scanning plus US, 3D/4D. It comes as life size of the upper abdomen including rib cage, organs, vasculature, and numerous pathology. The request was granted, and the \$13, 000 purchase was made using Perkins Grant funding.

Santa Rosa Jr. College affiliation in 6<sup>th</sup> year. Dr. Jen, Dean of Biology and Health Sciences for SRJC attended 2012 graduation.

**V.** Some clinical education partners have made decisions to set out for a time. We are actively looking to add new clinical education partners to make up for the differences. Congratulations to Santa Clara Valley Medical Center for restating the DMS affiliation.

*The tables below is data of class background prior to program entry. Two graduating classes of traditional Allied Health backgrounds (ex RT, RSPT, RN) as well as the nontraditional background students.*

### **Class Makeup for 2010-2012:**

<b>Background</b>	<b>Success</b>	<b>Non Completion</b>
RT backgrounds = 11 (+ BS anthro, BS Physio+cardiac US, BA psy, MD)	10/10	
Non traditional Backgrounds = 8 (42% accepted)		
MD background + RT	1/1	
BS Kinesiology + VT	2/2	
BS Physiology PreMed/ c EMT, DMS non accredited	4/4	
<b>TOTAL</b>	<b>18/18</b>	
% success of Allied Health (RT/RSPT)	10/10	100%
% success of MD* already counted under RT	1/1	100%
% success non-traditional	7/7	100%

### **Class Makeup for 2009-2011:**

<b>Background</b>	<b>Success</b>	<b>Non Completion</b>
RT backgrounds = 7 RN	5/7 0/1	1 failed academic + clinical; 1 WD
Non traditional Backgrounds = 8 (78% accepted)		
MD background	2/3	1 failed clinical
BS Kinesiology	1/1	
BS Physiology PreMed	1/1	
BS Bio PreVet	2/2	
BS Bio	7/7	
AS + another patient care background	1/1	
<b>TOTAL</b>	<b>17</b>	<b>2</b>
% success of Allied Health (RT/RN)	5/8	63%
% success of MD	2/3	67%
% success non-traditional	12/12	100%

Kathleen concluded her presentation by reminding affiliates to return their employee surveys, as an 80% return is required.

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**PROGRAM REVIEW DATA**

<http://www.foothill.edu/staff/irs/programplans/docs/2011-2012datasheets/BHS-DMS-all.pdf>