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**Bulletin / Banner Change Transmittal Form**

**[X] Undergraduate Curriculum Council**

**[ ] Graduate Council**

Signed paper copies of proposals submitted for consideration are no longer required. Please type approver name and enter date of approval.

Email completed proposals to curriculum@astate.edu for inclusion in curriculum committee agenda.

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| Deanna Barymon | 1/2/2017 |

**Department Curriculum Committee Chair** |

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**COPE Chair (if applicable)** |
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| Ray Winters  | 1/10/2017 |

**Department Chair:**  |

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**General Education Committee Chair (If applicable)**   |
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| Deanna Barymon  | 1/2/2017 |

**College Curriculum Committee Chair** |

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**Undergraduate Curriculum Council Chair** |
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| Susan Hanrahan | 1/10/2017 |

**College Dean** |

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**Graduate Curriculum Committee Chair** |
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**Vice Chancellor for Academic Affairs** |

**1.Contact Person** (Name, Email Address, Phone Number)

Deanna Barymon, dbarymon@astate.edu (870) 972-2555

**2.Proposed Change**

Remove RS 4822 Psychosocial Factors in Healthcare and RS436V Independent Study

Add RSU 4112 Sectional Anatomy Sonography

Correct 4613 and 4622 to the appropriate course titles on the 8 semester degree plan. The information is correct on the description of courses section of the bulletin.

**3.Effective Date**

Spring 2017

**4.Justification –** *Please provide details as to why this change is necessary.*

There were errors made during the last overhaul of the Radiologic Sciences curriculum. These changes will correct the errors.

**Bulletin Changes**

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| **Instructions**  |
| **Please visit** [**http://www.astate.edu/a/registrar/students/bulletins/index.dot**](http://www.astate.edu/a/registrar/students/bulletins/index.dot) **and select the most recent version of the bulletin. Copy and paste all bulletin pages this proposal affects below. Follow the following guidelines for indicating necessary changes.** **\*Please note: Courses are often listed in multiple sections of the bulletin. To ensure that all affected sections have been located, please search the bulletin (ctrl+F) for the appropriate courses before submission of this form.** - Deleted courses/credit hours should be marked with a red strike-through (~~red strikethrough~~)- New credit hours and text changes should be listed in blue using enlarged font (blue using enlarged font). - Any new courses should be listed in blue bold italics using enlarged font (***blue bold italics using enlarged font***)*You can easily apply any of these changes by selecting the example text in the instructions above, double-clicking the ‘format painter’ icon 🡪 , and selecting the text you would like to apply the change to.**Please visit* [*https://youtu.be/yjdL2n4lZm4*](https://youtu.be/yjdL2n4lZm4) *for more detailed instructions.* |

This bulletin revision demonstrates all proposed changes. This includes two course revision forms, one bulletin change form, and a bulletin change form that has been previously submitted to UCC and approved (removing CS 1013).

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**Major in Radiologic Sciences**

**Bachelor of Science in Radiologic Sciences
Emphasis in Diagnostic Medical Sonography**A complete 8-semester degree plan is available at http://registrar.astate.edu/.

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| **University Requirements:**  |  |
| See University General Requirements for Baccalaureate degrees (p. 42)  |  |
| **First Year Making Connections Course:**  | **Sem. Hrs.**  |
| RT 1003, Making Connections in Radiology  | **3**  |
| **General Education Requirements:**  | **Sem. Hrs.**  |
| See General Education Curriculum for Baccalaureate degrees (p. 84) **Students with this major must take the following:** *MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite BIO 2203* ***AND*** *2201, Human Anatomy and Physiology I and LaboratoryPSY 2013, Introduction to PsychologyCOMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)*  | **35**  |
| **Major Requirements:**  | **Sem. Hrs.**  |
| HP 2013, Medical Terminology  | 3  |
| HP 3413, Cultural Competency  | 3  |
| RAD 2001, Introduction to Medical Imaging and Radiation Sciences | 1  |
| RAD 3103, Introduction to Radiography  | 3  |
| RAD 3113 **AND** RAD 3111, Radiographic Procedures I and Laboratory  | 4  |
| RAD 3123, Radiation Physics and Imaging  | 3  |
| RAD 3202, Imaging Equipment  | 2  |
| RAD 3203 **AND** RAD 3201, Radiographic Procedures II and Laboratory  | 4  |
| RAD 3213 **AND** RAD 3211, Image Acquisition ~~&~~ and Evaluation I and Laboratory  | 4  |
| RAD 3223, Sectional Anatomy  | 3  |
| RAD 3233, Radiography Clinical I  | 3  |
| RAD 4103 **AND** RAD 4101, Radiographic Procedures III and Laboratory  | 4  |
| RAD 4113, Image Acquisition & Evaluation II  | 3  |
| RAD 4123, Imaging Pathology  | 3  |
| RAD 4132, Radiobiology  | 2  |
| RAD 4143, Radiography Clinical II  | 3  |
| RAD 4203, Radiography Clinical III  | 3  |
| RAD 4213, Radiography Clinical IV  | 3  |
| **Sub-total**  | **54**  |
| **Emphasis Area (Diagnostic Medical Sonography):**  | **Sem. Hrs.**  |
| ~~RS 4822 – Psychosocial Factors in Healthcare~~  | ~~2~~  |
| ~~RS 436V – Independent Study~~  | ~~2~~  |
| RSU 4112 – Sectional Anatomy Sonography  | 2  |
| RSU 4122 – Small Parts Sonography  | 2  |
| RSU 4132 – Small Parts Sonography Lab  | 2  |
| RSU 4213 – Physics and Instrumentation I  | 3  |
| RSU 4223 – Abdomen Sonography  | 3  |
| RSU 4232 – Abdomen Sonography Laboratory  | 2  |
| RSU 4322 – ~~Ob/Gyn~~ OBGYN Sonography Laboratory  | 2  |
| RSU 4323 – Physics and Instrumentation II  | 3  |
| RSU 4413 – Vascular Sonography  | 3  |

*The bulletin can be accessed at http://www.astate.edu/a/registrar/students/*

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**Major in Radiologic Sciences (cont.)**

**Bachelor of Science in Radiologic Sciences
Emphasis in Diagnostic Medical Sonography**A complete 8-semester degree plan is available at http://registrar.astate.edu/.

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| RSU 4422 – Vascular Sonography Laboratory  | 2  |
| ~~RSU 4513 – Ultrasound Clinic I~~  | ~~3~~  |
| RSU 4511 – Ultrasound Clinic I  | 1 |
| RSU 4523 – Ultrasound Clinical Education II  | 3  |
| RSU 4534 – Ultrasound Clinical Education III  | 4  |
| ~~RSU 4542 – Ultrasound Clinic IV~~  | ~~2~~  |
| RSU 4544 – Ultrasound Clinical Education IV  | 4 |
| RSU 4551 – Sonography Clinical ~~Relevance~~ Relevancy | 1  |
| RSU 4613 – ~~Ob/Gyn~~ Obstetric and Gynecologic Sonography II  | 3  |
| RSU 4622 – ~~Ob/Gyn~~ Obstetric Sonography ~~I II~~ | 2  |
| RSU 4652 – Special Procedures in Sonography  | 2  |
| **Sub-total**  | **~~46 44~~**  |
| **Required Support Courses:**  | **Sem. Hrs.**  |
| BIO 2223 **AND** 2221, Human Anatomy and Physiology II and Laboratory  | **4**  |
| **~~Additional Support Courses:~~**  | **~~Sem. Hrs.~~**  |
| ~~CS 1013, Introduction to Computers~~  | **~~3~~**  |
| **Total Required Hours:**  | **~~145 140~~** |

Clean UP

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**Diagnostic Medical Sonography (RSU)**

**RSU 4101. Introduction to Ultrasound** This course will provide an overview of the foundations of diagnostic medical sonography and the practitioners role in the health care delivery system. Spring.

**RSU 4112. Sectional Anatomy Sonography** Knowledge of anatomical layering and review body systems. Sonographic terminology, organ and organ system relationships, and directional terminology will also be focused upon in this course. Prerequisite, formal acceptance ~~in to~~ into the professional program. Summer.

**RSU 4122~~,~~. Small Parts Sonography** Knowledge of anatomy pathology of small parts including male pelvis, breast, thyroid, and musculoskeletal sonography. Prerequisite, formal acceptance ~~in to~~ into the professional program. Summer.

**RSU 4132. Introduction to Sonography Laboratory** Clinical application knowledge of sonog- raphy equipment, sonographic terminology, and anatomy pathology of small parts. Students will participate in directed scanning exercises and simulator scanning to develop the critical thinking skills needed in practice of sonography. Prerequisite, formal acceptance ~~in to~~ into the professional program. Summer.

**RSU 4213. Ultrasound Physics and Instrumentation I** This course will provide theoretical foundations and clinical applications of ultrasound physics and instrumentation, including Doppler principles, performance testing, and bioeffects. Prerequisite, formal acceptance ~~in to~~ into the professional program. Fall.

**RSU 4223. Abdominal Sonography I** Specific anatomic and pathologic information necessary for the clinical practice of abdominal diagnostic medical sonography, including abdominal organs and organ systems, normal, abnormal appearances, and pertinent laboratory tests are discussed. Prerequisite, formal acceptance ~~in to~~ into the professional program. Fall.

**RSU 4232. Abdominal Sonography I Laboratory** This course will provide clinical application knowledge of abdominal organs and organ systems. Students will participate in directed scan- ning exercises and simulator scanning to develop the critical thinking skills needed in practice of abdominal sonography. Prerequisite, formal acceptance ~~in to~~ into the professional program. Fall.

**RSU 4322. OBGYN Sonography Laboratory** Laboratory scanning of specific anatomy and pathology necessary for the clinical practice of obstetric and gynecologic diagnostic medical sonog- raphy. Corequisites, RSU 4613 and 4323. Prerequisite, formal acceptance ~~in to~~ into the professional program. Spring.

**RSU 4323. Physics and Instrumentation II** This course is a continuation of RSU 4213. Advanced theoretical foundations and clinical applications of ultrasound physics and instrumentation, including Doppler principles, performance testing, and bioeffects. Prerequisite, formal acceptance ~~in to~~ into the professional program. Spring.

**RSU 4413. Vascular Sonography** Knowledge of venous and arterial anatomy, physiology and clinical considerations necessary for practice in the vascular clinical setting. Anatomy of the upper and lower extremities, abdomen, special circulations, cerebrovascular circulation. Prerequisite, formal acceptance ~~in to~~ into the professional program. Fall.

**RSU 4422. Vascular Sonography Laboratory** Ultrasound scanning of anatomy of the upper and lower extremities, abdomen, and special circulations, as well as cerebrovascular intra and extracranial circulation will be the focus of this course. Prerequisite, formal acceptance ~~in to~~ into the professional program. Fall.

**RSU 451**~~3~~1**. Ultrasound Clinic I** Entry level content and clinical practice experiences designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in small parts and abdominal sonography. Prerequisite, formal acceptance ~~in to~~ into the professional program. Fall.

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**RSU 4523. Ultrasound Clinical Education II** Advanced level content and clinical practice experiences designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in small parts, abdominal, and ob-gyn sonography. Prerequisite, formal acceptance ~~in to~~ into the professional program. Spring.

**RSU 4534. Ultrasound Clinical Education III** Advanced level content and clinical practice experiences designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in small parts, abdominal, and obstetrics and gynecology sonography. Prerequisite, formal acceptance ~~in to~~ into the professional program. Summer.

**RSU 454**~~2~~4**. Ultrasound Clinical Education IV** Advanced level content and clinical practice experiences designed for sequential development application, analysis, integration, synthesis and evaluation of concepts. Prerequisite, formal acceptance ~~in to~~ into the professional program. ~~Summer~~ Fall.

**RSU 4551. Sonography Clinical Relevancy** Advancedapplicationofanatomyandpathology as seen with sonographic examination and case studies will be the focus of this course. Prerequisite, formal acceptance ~~in to~~ into the professional program. Fall.

**RSU 4552. Ultrasound Clinical Education V** Advanced level content and clinical practice experiences designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in small parts, abdominal, ob gyn, and vascular sonography. Prerequisite, formal acceptance ~~in to~~ into the professional program. Fall.

**RSU 4562. Ultrasound Clinical Education VI** Provides students with supplemental clinical experience in the event students should miss an excessive amount of clinical days, the student feels that additional clinical experience in needed, or DMS faculty and clinical instructors feel that the student would benefit from additional clinical experience. Prerequisite, formal acceptance ~~in to~~ into the professional program. Demand.

**RSU 4563. Ultrasound Clinical Education VII** Provides students with supplemental clinical experience in the event students should miss an excessive amount of clinical days, the student feels that additional clinical experience in needed, or DMS faculty and clinical instructors feel that the student would benefit from additional clinical experience. Prerequisite, formal acceptance ~~in to~~ into the professional program. Demand.

**RSU 4564. Ultrasound Clinical Education VIII** Provides students with supplemental clinical experience in the event students should miss an excessive amount of clinical days, the student feels that additional clinical experience in needed, or DMS faculty and clinical instructors feel that the student would benefit from additional clinical experience. Prerequisite, formal acceptance ~~in to~~ into the professional program. Demand.

**RSU 4613. Obstetric and Gynecologic Sonography** Specific anatomic and pathologic informa- tion necessary for the clinical practice of obstetric and gynecologic diagnostic medical sonography. Prerequisite, formal acceptance ~~in to~~ into the professional program. Fall.

**RSU 4622. Obstetric Sonography II** Continuation of specific anatomic and pathologic informa- tion necessary for the clinical practice of obstetric diagnostic medical sonography. Registration restricted to students who have successfully completed the spring semester in the DMS program. Prerequisite, formal acceptance ~~in to~~ into the professional program. Summer.

**RSU 4642. Introduction to Cardiovascular Sonography** Cardiovascularanatomy,physiology and clinical considerations necessary for practice in the cardiovascular clinical setting. Indications for cardiovascular testing and disease processes are discussed. Prerequisite, formal acceptance ~~in to~~ into the professional program. Summer.

**RSU 4652. Special Procedures in Sonography** Specific anatomic and pathologic informa- tion necessary for the clinical practice of special procedures in abdominal, pediatric, and neonatal diagnostic medical sonography. Fall.

**RSU 4712. Introduction to Cardiac Sonography** Cardiac anatomy, physiology and clinical considerations necessary for practice in the cardiovascular clinical setting. Indications for cardiac testing and disease processes are discussed. Prerequisite, formal acceptance ~~in to~~ into the professional program. Spring.

**RSU 4723. Cardiac Sonography** Continueddiscussionofcardiacdiseaseprocesses.Corequisite RSU 4732. Good standing in DMS program required. Summer.

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**RSU 4732. Competency Sonography Lab I** Clinical application knowledge of small parts, abdominal organs and organ systems. Students will participate in directed scanning exercises and simulator scanning to develop the critical thinking skills needed. Corequisite, 4223. Prerequisite, formal acceptance ~~in to~~ into the professional program. Fall.

**RSU 4742. Cardiac Sonography Lab** Provide clinical application knowledge of gynecologic and obstetrical, vascular, or cardiac sonography. Directed scanning exercises and simulator scanning to develop the critical thinking skills. Registration restricted to students who have successfully completed the fall semester of appropriate DMS program. Summer.

**RSU 4762. Advanced Vascular Sonography Procedures** Clinical application knowledge of advanced vascular sonography procedures, directed scanning exercises and simulator scanning to develop the critical thinking skills needed in practice of vascular sonography. Prerequisite, formal acceptance ~~in to~~ into the professional program. Spring.

**RSU 4812. Cardiac Conduction and Arrhythmia** Provides an understanding of normal and abnormal conduction of electrical impulses in the cardiac system. Prepares students to recognize cardiac rhythms in the clinical setting. Registration restricted by admittance to the DMS program. Spring.