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| For Academic Affairs and Research Use Only |
| CIP Code:  |  |
| Degree Code: |  |

**New Emphasis, Concentration or Option Proposal 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 | 10/5/2018 |

**Department Curriculum Committee Chair** |

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**COPE Chair (if applicable)** |
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| Cheryl DuBose | 10/5/2018 |

**Department Chair:**  |

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**Head of Unitb (If applicable)**   |
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| Evi Taylor | 10/15/2018 |

**College Curriculum Committee Chair** |

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**Undergraduate Curriculum Council Chair** |
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| Susan Hanrahan | 10/15/2018 |

**College Dean** |

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**Graduate Curriculum Committee Chair** |
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**General Education Committee Chair (If applicable)**   |

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**Vice Chancellor for Academic Affairs** |

**i. Proposed Program Title**

Bachelor of Science in Radiologic Sciences Emphasis in Imaging Specialist

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

Cheryl DuBose

cdubose@astate.edu

(870) 972-2772

**iii. Proposed Starting Date**

Fall 2019

**Bulletin Changes**

|  |
| --- |
| **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.* |

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The Radiologic Sciences Programs are administered by the Department of Medical Imaging & Radiation Sciences in the College of Nursing and Health Professions. The degree is designed to pro­duce baccalaureate prepared, radiologic science professionals who are multi-skilled, multi-competent practitioners.

The Medical Imaging & Radiation Sciences graduate is a professional who is a competent, multi-skilled, entry-level practitioner. Technologists who are educated in multiple modalities and skills have better job prospects than those with just one area of expertise. This is the foundational philosophy of the Department of Medical Imaging and Radiation Sciences. Students will learn at least two imaging modalities or skill sets in roughly 24-36 months.

The role of the multi-skilled technologist is multi-faceted and developed through extensive study in the areas of liberal education, professional values, core competencies, core knowledge and role development. This knowledge base prepares the beginning baccalaureate graduate to function in the world of medical imaging and radiation therapy. The program is a “1 plus 1” model, meaning all students begin with radiography coursework, followed by one of ~~six~~ ***several*** “tracks” for their final year.

**OUR MISSION**

“The Medical Imaging and Radiation Sciences Program at Arkansas State University exists to produce competent, entry-level practitioners for the practice of diagnostic imaging and radiation therapy.”

**GOALS AND OUTCOMES FOR MEDICAL IMAGING AND RADIATION SCIENCES**

1. Students will be clinically competent.

2. Students will develop critical thinking skills.

3. Students will demonstrate communicate skills.

4. Students will model professionalism.

**THE BSRS PROGRAM**

Students who are accepted into the program (see program admission) complete all core radiography program courses, then select a senior year emphasis from one of the following tracks:

Cardiovascular-Interventional Technology

Diagnostic Medical Sonography

***Imaging Specialist***

Magnetic Resonance Imaging

Mammography/Breast Sonography

Medical Imaging Informatics

 Radiation Therapy

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**DESCRIPTION OF TRACKS**

**First Year:**

Radiography: Provides students with the skills necessary to administer radiation for imaging various body systems.

**Second Year:**

Computed Tomography: Provides students with the skills necessary to operate CT scanners and construct sectional images through computer enhancement.

Cardiovascular-Interventional Technology: Provides students with the skills necessary to operate spe­cialized radiographic equipment and control specific images through various imaging enhancements.

Diagnostic Medical Sonography: Provides students with the skills necessary to operate sonographic equipment and control images through various enhancements.

***Imaging Specialist: Provides students with the skills necessary to function in more advanced radiologic technology areas including but not limited to fluoroscopy, emergency room and operating room settings.***

Magnetic Resonance Imaging: Provides students with the skills necessary operate MRI scanners and construct sectional images through computer enhancement.

Mammography: Provides students with the skills necessary to operate specialized mammography machines, as well as perform needle localizations.

Medical Imaging Informatics: Provides students with the skills necessary to manipulate patient images and data for use and storage.

Radiation Therapy: Provides students with the skills necessary to operate therapeutic radiation systems and thus become a professional, entry level radiation therapist.

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Major in Radiologic Sciences

**Bachelor of Science in Radiologic Sciences**

Emphasis in Imaging Specialist

A complete 8-semester degree plan is available at https://www.astate.edu/info/academics/degrees/

|  |
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| University Requirements:  |
| See University General Requirements for Baccalaureate degrees (p. 44)  |
| **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. 89) **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 Laboratory* *COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)*  | **35**  |
| **Major Requirements:**  | Sem. Hrs.  |
| **HP 2013, Medical Terminology**  | **3**  |
| **RAD 2001, Intro to Medical Imaging**  | **1**  |
| **RAD 3103, Intro 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 & Evaluation I and Laboratory**  | **4**  |
| **RAD 3223, Sectional Anatomy**  | **3**  |
| **RAD 3232, Radiography Clinical I**  | **2**  |
| **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  | 50 |
| **Emphasis Area (Imaging Specialist**  | **Sem. Hrs.**  |
| BIO 2223 **AND** 2221, Human Anatomy and Physiology II and Laboratory  | 4  |
| RS 3122, Legal & Regulatory Environment of Radiology  | 2  |
| RS 3142, Advanced Imaging and Therapy I  | 2  |
| RS 3152, Advanced Imaging and Therapy II  | 2  |
| RS 4343, Radiologic Administrative Concepts  | 3  |
| RS 436V, Independent Study in the Radiologic Sciences  | 1  |
| RS 4463, Statistics for Medical Imaging  | 3  |
| RS 4623, Computed Tomography Instrumentation  | 3 |
| RS 4633, Computed Tomography Procedures | 3 |
| RS 4643, Computed Tomography Clinical Education | 3 |
| RS 4822, Psychosocial Factors in Healthcare  | 2  |
| RS 4834, Imaging Specialist Clinical Education I | 4 |
| RS 4844, Imaging Specialist Clinical Education II | 4 |
| RS 4852, Advanced Radiologic Pathophysiology I  | 2  |
| RS 4862, Advanced Radiologic Pathophysiology II  | 2  |
| Sub-total  | 40 |
| Total Required Hours:  | 128 |

**EMPHASIS ASSESSMENT**

**Emphasis Goals**

1. Justification for the introduction of the new emphasis. Must include:

1. Academic rationale (how will this emphasis fit into the mission established by the department for the curriculum?)
To fulfill a need in our community for educational prepared and multi-credentialed technologists. Students with this emphasis will specialize in advanced diagnostic imaging environments such as emergency and operating rooms as well as fluoroscopy. To satisfy the department mission for multi-credentialing, students will also obtain training in computed tomography.
2. List emphasis goals (faculty or curricular goals, specific to the emphasis.)

In addition to the department goals, the Imaging Specialist emphasis will concentrate on advanced imaging areas where students receive limited exposure during the radiography program.

1. Students will be competent in all manner of sterile technique imaging examinations to include C-arm and special procedures.

2. Students will be competent in basic CT procedures

3. Students will demonstrate proper radiation safety for themselves and others in the imaging environment.

d. Student population served.

Students who have completed the radiography portion of the Bachelor of Science in Radiologic Sciences degree who choose to focus on advanced techniques within the diagnostic imaging department. This emphasis is ideal for the emergency room and OR technologist.

**Emphasis Student Learning Outcomes**

2. Please fill out the following table to develop a continuous improvement assessment process for this emphasis.

*For further assistance, please see the ‘Expanded Instructions’ document available on the UCC - Forms website for guidance, or contact the Office of Assessment at 870-972-2989.*

***Note: Best practices suggest an emphasis would have 1 to 3 outcomes.***

|  |  |
| --- | --- |
| **Outcome 1** | Students will be competent in all manner of sterile technique imaging examinations to include C-arm and special procedures. |
| Assessment Procedure Criterion | Clinical Competency Examination and Attitude and Behavior evaluation  |
| Which courses are responsible for this outcome? | RS 4834, Imaging Specialist Clinical Education IRS 4844. Imaging Specialist Clinical Education II |
| Assessment Timetable | Fall and Spring Semesters annually |
| Who is responsible for assessing and reporting on the results? | Clinical Coordinator |

|  |  |
| --- | --- |
| **Outcome 2** | Students will demonstrate proper radiation safety for themselves and others in the imaging environment. |
| Assessment Procedure Criterion | Clinical Competency Examination and Attitude and Behavior evaluation  |
| Which courses are responsible for this outcome? | RS 4834, Imaging Specialist Clinical Education IRS 4844. Imaging Specialist Clinical Education II  |
| Assessment Timetable | Fall, Spring, and Summer annually |
| Who is responsible for assessing and reporting on the results? | Clinical Coordinator  |

*Please repeat as necessary.*

**LETTER OF NOTIFICATION – 3
NEW OPTION, CONCENTRATION, EMPHASIS**(Maximum 18 semester credit hours of new theory courses and 6 credit hours of new practicum courses)

1. Institution submitting request:

Arkansas State University-Jonesboro

2. Contact person/title:

 Dr. Cheryl DuBose

3. Phone number/e-mail address:

 (870) 972-2772/ cdubose@astate.edu

4. Proposed effective date:

2019-2020 Academic Year/Fall 2019

5. Title of degree program: (Indicate if the degree listed above is approved for distance delivery)

Bachelor of Science in Radiologic Sciences

6. CIP Code:

Enter text...

7. Degree Code:

Enter text...

8. Proposed name of new option/concentration/emphasis:

Imaging Specialist

9. Reason for proposed action:

The advisory board for Medical Imaging and Radiation Sciences has identified a need for an advanced level radiography practitioner.

10. New option/emphasis/concentration objective:

 To fulfill a need in our community for educational prepared and multi-credentialed technologists. Students with this emphasis will specialize in advanced diagnostic imaging environments such as emergency and operating rooms as well as fluoroscopy. To satisfy the department mission for multi-credentialing, students will also obtain training in computed tomography. In addition to the department goals, the Imaging Specialist emphasis will concentrate on advanced imaging areas where students receive limited exposure during the radiography program. Emphasis goals include: 1. Students will be competent in all manner of sterile technique imaging examinations to include C-arm and special procedures. 2. Students will demonstrate proper radiation safety for themselves and others in the imaging environment.

11. Provide the following:

* 1. Curriculum outline - List of courses in new option/concentration/emphasis – Underline required courses

Bio 2223 And 2221, Human Anatomy and Physiology II and Laboratory

RS 3122, Legal and Regulatory Environment of Radiology

RS 3142, Advanced Imaging and Therapy I

RS 3152, Advanced Imaging and Therapy II

RS 4343, Radiologic Administrative Concepts

RS 436V, Independent Study in Radiologic Sciences

RS 4463, Statistics for Medical Imaging

RS 4623, Computed Tomography Instrumentation

RS 4633, Computed Tomography Procedures

RS 4643, Computed Tomography Clinical Education

RS 4822, Psychosocial Factors in Healthcare

RS 4834, Imaging Specialist Clinical Education I

RS 4844, Imaging Specialist Clinical Education II

RS 4852, Advanced Radiologic Pathophysiology I

RS 4862, Advanced Radiologic Pathophysiology II

* 1. Provide degree plan that includes new option/emphasis/concentration

|  |
| --- |
| **Year 1** |
| **Fall Semester** |  | **Spring Semester** |
| **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |   | **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |
| ENG 1003 | English 1 | 3 | x |  | ENG 1013 | English II | 3 | x |
| MATH 1023 | College Algebra | 3 | x |  | BIO 2223 | Anatomy and Physiology II | 3 |  |
| RT 1003 | Making Connections | 3 |  |  | BIO 2221 | Anatomy and Physiology Lab II | 1 |  |
| BIO2103 | Anatomy and Physiology I | 3 | x |  | RAD 3103 | Intro to Radiography | 3 |  |
| BIO 2101 | Anatomy and Physiology Lab I | 1 | x |  | RAD 3113/3111 | Radiographic Procedures I & Lab | 4 |  |
| PSY 2013 | Intro to Psychology | 3 | x |  | RAD 3123 | Radiation Physics and Imaging | 3 |  |
| RAD 2001 | Intro to Medical Imaging | 1 |  |  |  |  |  |  |
| **Total Hours:**  | 17  |   | **Total Hours**: | 17 |
|  |
| **Summer Semester** |  |  |
| **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |   |  |  |  |  |
| RAD 3232 | Radiography Clinical I | 2 |  |  |  |  |  |  |
| RAD 3223 | Sectional Anatomy | 3 |  |  |  |  |  |  |
|  | Humanities (choose from list) | 3 | x |  |  |  |  |  |
|  | Physical Science (choose from list) | 4 | x |  |  |  |  |  |
|  | **Total Hours:** | 12 |  |  |  |  |  |
| **Year 2** |
| **Fall Semester** |  | **Spring Semester** |
| **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |  | **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |
| RAD 3202 | Imaging Equipment | 2 |  |  | RAD 4103 | Radiographic Procedures III | 3 |  |
| RAD 3203 | Radiographic Procedures II  | 3 |  |  | RAD 4101 | Radiographic Procedures III Lab | 1 |  |
| RAD 3201 | Radiographic Procedures II Lab | 1 |  |  | RAD 4113 | Image Acquisition & Evaluation II | 3 |  |
| RAD 3213 | Image Acquisition & Evaluation I | 3 |  |  | RAD 4203 | Radiography Clinical III | 3 |  |
| RAD 3211 | Image Acquisition & Evaluation I Lab | 1 |  |  | RAD 4132 | Radiobiology | 2 |  |
| RAD 4143 | Radiography Clinical II | 3 |  |  | HP 2103 | Medical Terminology | 3 |  |
| COMS 1203 | Oral Communication | 3 | x |  |  |  |  |  |
| **Total Hours:**  |  16 |   | **Total Hours**: | 15 |
|  |
| **Summer Semester** |  |  |
| **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |   |  |  |  |  |
| RAD 4213 | Radiography Clinical IV | 3 |  |  |  |  |  |  |
| RAD 4213 | Imaging Pathology | 3 |  |  |  |  |  |  |
|  | Social Science (choose from list) | 3 | x |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  | **Total Hours:** | 9 |  |  |  |  |  |
| **Year 3** |
| **Fall Semester** |  | **Spring Semester** |
| **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |   | **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |
| RS 3142 | Adv. Imaging I | 2 |  |  | RS 3152 | Adv. Imaging II | 2 |  |
| RS 3122 | Legal and Regulatory | 2 |  |  | RS 4343 | Radiologic Admin Concepts | 3 |  |
| RS 4623 | CT Instrumentation | 3 |  |  | RS 4633 | CT Procedures | 3 |  |
| RS 4852 | Adv. Rad Pathophysiology I | 2 |  |  | RS 4862 | Adv. Rad Pathophysiology II | 2 |  |
| RS 4463 | Stats for Med. Imaging | 3 |  |  | RS 4822 | Psychosocial Factors | 2 |  |
| RS 4834 | Imaging Specialist Clinical Education I | 4 |  |  | RS 4844 | Imaging Specialist Clinical Education II | 4 |  |
|  |  |  |  |  |  |  |  |  |
|  | **Total Hours:** | 16 |  |  | **Total Hours:** | 16 |
|  |
| **Summer Semester** |
| **Course No.** | **Course Name** | **Hrs** | **Gen Ed** |
| RS 4643 | CT Clinical Education | 3 |  |  |  |  |  |  |
| RS 436 (V) | Independent Study | 1 |  |  |  |  |  |  |
|  | U.S. History or Gov’t | 3 | x |  |  |  |  |  |
|  | Fine Arts (choose from list) | 3 | x |  |  |  |  |  |
|  | **Total Hours:** | 10 |  |  |  |  |  |
| **Total Upper-Level Hours:**  | 88 |   | **Total Degree Hours:** | 128 |

* 1. Total semester credit hours required for option/emphasis/concentration

 (Option range: 9–24 semester credit hours)

 128 hours

* 1. New courses and new course descriptions

 RS 4834, Imaging Specialist Clinical Education I Supervised clinical experience in routine radiographic procedures. Students are evaluated with a competency based evaluation. Prerequisite, Admission to the Radiologic Science Program. Fall. RS 4844, Imaging Specialist Clinical Education II Supervised clinical experience in routine radiographic procedures. Students are evaluated with a competency based evaluation. Prerequisite, Admission to the Radiologic Science Program. Spring.

* 1. Goals and objectives of program option

 Emphasis goals include: 1. Students will be competent in all manner of sterile technique imaging examinations to include C-arm and special procedures. 2. Students will demonstrate proper radiation safety for themselves and others in the imaging environment.

* 1. Expected student learning outcomes

 Students will apply positioning skills, perform proper radiation safety, adapt imaging parameters for non-routine patients, and critique images for diagnostic quality.

* 1. Documentation that program option meets employer needs

 The advisory board for Medical Imaging and Radiation Sciences has identified a need for an advanced level radiography practitioner.

* 1. Student demand (projected enrollment) for program option

 6-10 per year

* 1. Name of institutions offering similar program or program option and the institution(s) used as a model to develop the proposed program option

 Thomas Jefferson University, Philadelphia, PA; Midwestern State University, Wichita Falls, TX

12. Institutional curriculum committee review/approval date:

13. Will the new option/emphasis/concentration be offered via distance delivery? No

 If yes, indicate mode of distance delivery:

 Enter text...

14. Explain in detail the distance delivery procedures to be used:

 N/A

15. Specify the amount of additional costs required for program implementation, the source of funds, and how funds will be used.

 This program will use existing staffing and resources. No additional costs will be required.

16. Provide additional program information if requested by ADHE staff.

President/Chancellor Approval Date: Click here to enter a date.

Board of Trustees Notification Date: Click here to enter a date.

Chief Academic officer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: Enter date.

 Name (printed): Click here to enter text.