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

**Letter of Notifications**

**[ 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](mailto:curriculum@astate.edu) for inclusion in curriculum committee agenda.

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| --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | Deanna Barymon | 4/15/2019 |   **Department Curriculum Committee Chair** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **COPE Chair (if applicable)** |
| |  |  | | --- | --- | | Cheryl DuBose | 4/15/2019 |   **Department Chair:** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **Head of Unit (If applicable)** |
| |  |  | | --- | --- | | Evi Taylor | 4/30/2019 |   **College Curriculum Committee Chair** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **Undergraduate Curriculum Council Chair** |
| |  |  | | --- | --- | | Susan Hanrahan | 4/30/2019 |   **College Dean** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **Graduate Curriculum Committee Chair** |
| |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **General Education Committee Chair (If applicable)** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **Vice Chancellor for Academic Affairs** |

**If you require to fill out a Letter of Notification, please email** [**curriculum@astate.edu**](mailto:curriculum@astate.edu) **or contact Academic Affairs and Research at (870) 972-2030 for guidance PRIOR TO submitting these through the curricular process.**

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

Cheryl DuBose

[cdubose@astate.edu](mailto:cdubose@astate.edu)

870-972-2772

**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.* |

Page 358: Post-Baccalaureate Certificate in Medical Imaging and Therapy

The certificate will provide students who hold a baccalaureate degree in Radiologic Sciences (BSRS) and a primary pathway certification to return for additional radiologic licensure opportunities. A post-baccalaureate certificate will be awarded to those students who complete the required coursework and who have earned a previous BSRS degree and primary pathway certification (e.g. RT(T); RT(MR); RT(R); RT(S); ARDMS).

Core Requirements (BSRS courses completed previously):

ARRT or ARDMS certification and registration in a primary pathway area

BIO 2203 Human Anatomy and Physiology I

BIO 2201 Human Anatomy and Physiology I lab

BIO 2223 Human Anatomy and Physiology II

BIO 2221 Human Anatomy and Physiology II lab

HP 2013 Medical Terminology

Choose ONE of the following concentrations:

Cardiovascular-Interventional Technology

|  |  |
| --- | --- |
| RS 4413, Cardiovascular Equipment and Intervention | 3 |
| RS 4423, Cardiovascular-Interventional Procedures and Instrumentation | 3 |
| RS 4433, Cardiac Equipment and Intervention | 3 |
| RS 4443, Cardiac Physiology and Procedures | 3 |
| RS 4444, Cardiac Clinic | 4 |
| RS 4454, Cardiovascular-Interventional Clinical Education | 4 |
| RS 4483, Cardiovascular-Interventional Internship | 3 |
| Total | 23 |

Diagnostic Medical Sonography

|  |  |
| --- | --- |
| RSU 4112 – Sectional Anatomy Sonography | 2 |
| RSU 4122 – Small Parts Sonography | 2 |
| RSU 4132 – Introduction to Sonography Laboratory | 2 |
| RSU 4213 – Ultrasound Physics and Instrumentation | 3 |
| RSU 4223 – Abdomen Sonography I | 3 |
| RSU 4232 – Abdomen Sonography I Laboratory | 2 |
| RSU 4322 – OBGYN Sonography Laboratory | 2 |
| RSU 4323 – Physics and Instrumentation II | 3 |
| RSU 4413 – Vascular Sonography | 3 |
| RSU 4422 – Vascular Sonography Laboratory | 2 |
| RSU 4511 – Ultrasound Clinic I | 1 |
| RSU 4523 – Ultrasound Clinical Education II | 3 |
| RSU 4534 – Ultrasound Clinical Education III | 4 |
| RSU 4544 – Ultrasound Clinical Education IV | 4 |
| RSU 4551 – Sonography Clinical Relevancy | 1 |
| RSU 4613 – Obstetric and Gynecologic Sonography | 3 |
| RSU 4622 – Obstetric Sonography II | 2 |
| RSU 4652 – Special Procedures in Sonography | 2 |
| Total | 44 |

Magnetic Resonance Imaging

|  |  |
| --- | --- |
| RSMR 4703, MRI Safety and Instrumentation | 3 |
| RSMR 4712, Imaging Information Management | 2 |
| RSMR 4723, MRI Procedures I | 3 |
| RSMR 4733, MRI Procedures II | 3 |
| RSMR 4753, MRI Clinical Education I | 3 |
| RSMR 4763, MRI Clinical Education II | 3 |
| RSMR 4773, MRI Clinical Education III | 3 |
| RSMR 4803, MRI Physical Principles I | 3 |
| RSMR 4813, MRI Physical Principles II | 3 |
| RSMR 4823, Data Acquisition and Processing | 3 |
| RSMR 4833, Advanced MRI Imaging | 3 |
| Total | 32 |

Mammography

|  |  |
| --- | --- |
| RS 4502, Mammography Procedures | 2 |
| RS 4512, Mammography Instrumentation | 2 |
| RS 4553, Mammography Clinical Education I | 3 |
| RS 4563, Mammography Clinical Education II | 3 |
| RS 4573, Imaging in Women's Health Clinical Education | 3 |
| RSU 4213, Ultrasound Physics and Instrumentation I | 3 |
| RSU 4323, Physics and Instrumentation II | 3 |
| RSU 4833, Breast Sonography | 3 |
| Total | 22 |

Medical Imaging Informatics

|  |  |
| --- | --- |
| CIT 1503, Microcomputer Applications | 3 |
| CIT 2033, Programming Fundamentals | 3 |
| CIT 2523, Telecommunications and Networking Essentials | 3 |
| CIT 3013, Management Information Systems | 3 |
| CIT 3403, Database Management | 3 |
| CIT 4523, Advanced Network Telecommunications | 3 |
| CIT 4623, Computer Security | 3 |
| CIT 488V, Internship in CIT | 3 |
| RS 3142, Advanced Imaging and Therapy I | 2 |
| RS 3152, Advanced Imaging and Therapy II | 2 |
| RSMR 4712, Imaging Information Management | 2 |
| RSMR 4713, Imaging Standards of Communication and Interoperability | 3 |
| Total | 33 |

Radiation Therapy

|  |  |
| --- | --- |
| RST 4203, Introduction to Radiation Therapy and Patient Care | 3 |
| RST 4214, Radiation Therapy Principles and Practice I | 4 |
| RST 4224, Radiation Therapy Principles and Practice II | 4 |
| RST 4234, Radiation Therapy Principles and Practice III | 4 |
| RST 4242, Radiation Therapy Clinical Treatment Planning | 2 |
| RST 4313, Radiation Therapy Physics I | 3 |
| RST 4323, Radiation Therapy Physics II | 3 |
| RST 4333, Applied Radiation Biology | 3 |
| RST 4413, Radiation Protection, Safety, and Quality Management | 3 |
| RST 4513, Radiation Therapy Clinical Education I | 3 |
| RST 4523, Radiation Therapy Clinical Education II | 3 |
| RST 4533, Radiation Therapy Clinical Education III | 3 |
| Total | 38 |

Radiologic Technology

|  |  |
| --- | --- |
| RAD 3103, Introduction to Radiography | 3 |
| RAD 3113 **AND** RAD 3111, Radiographic Procedures I and Lab | 4 |
| RAD 3123, Radiation Physics and Imaging | 3 |
| RAD 3202, Imaging Equipment | 2 |
| RAD 3203 **AND** RAD 3201, Radiographic Procedures II and Lab | 4 |
| RAD 3213 **AND** RAD 3211, Image Acquisition and Evaluation I and Lab | 4 |
| RAD 3232, Radiography Clinical I | 2 |
| RAD 4103 **AND** RAD 4101, Radiographic Procedures III and Lab | 4 |
| RAD 4113, Image Acquisition and 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 |
| Total | 43 |

**LETTER OF NOTIFICATION – 9**

**UNDERGRADUATE CERTIFICATE PROGRAM**

(21-45 semester credit hours)

(75 percent of the courseworkcurrently offered inexisting associate or bachelor’s degree program)

1. Institution submitting request: Arkansas State University - Jonesboro
2. Contact person/title: Cheryl DuBose, Dept Chair of Medical Imaging and Radiation Sciences
3. Phone number/e-mail address: 870-972-2772; [cdubose@astate.edu](mailto:cdubose@astate.edu)
4. Proposed effective date: Spring 2020
5. Name of proposed Undergraduate Certificate Program (Program must consist of 21-45 semester credit hours).
   * + 1. Post-Baccalaureate Certificate in Medical Imaging and Therapy
6. Proposed CIP Code:
7. Reason for proposed program implementation: To fulfill a need in our community for educationally prepared and nationally certified medical imaging technologists and radiation therapists. This certificate will allow students who have earned a baccalaureate degree in Radiologic Sciences (BSRS) and a primary pathway certification (e.g., RT(T); RT(MR); RT(R); RT(S); ARDMS) to specialize in an additional licensure area and qualify for a post-baccalaureate certificate in Medical Imaging and Therapy. Students with these qualifications are currently ineligible to receive a second BSRS degree and need an additional education avenue. Courses within this post-baccalaureate certificate are drawn from an existing degree program and will require no additional faculty or institutional resources.
8. Provide the following:
9. Curriculum outline - List of courses in new program – Underline required courses

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|  | Core Requirements  The core requirements of this post-baccalaureate certificate are completed en route to the Bachelor of Science in Radiologic Sciences (BSRS). These include Anatomy and Physiology I and II, and Medical Terminology.  Required courses are completed from one of the following option categories:   |  |  | | --- | --- | | 1. Cardiovascular-Interventional Technology |  | | RS 4413, Cardiovascular Equipment and Intervention | 3 | | RS 4423, Cardiovascular-Interventional Procedures and Instrumentation | 3 | | RS 4433, Cardiac Equipment and Intervention | 3 | | RS 4443, Cardiac Physiology and Procedures | 3 | | RS 4444, Cardiac Clinic | 4 | | RS 4454, Cardiovascular-Interventional Clinical Education | 4 | | RS 4483, Cardiovascular-Interventional Internship | 3 | | Total | 23 |  1. Diagnostic Medical Sonography option:  |  |  | | --- | --- | | 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 – OBGYN Laboratory | 2 | | RSU 4323 – Physics and Instrumentation II | 3 | | RSU 4413 – Vascular Sonography | 3 | | RSU 4422 – Vascular Sonography Laboratory | 2 | | RSU 4511 – Ultrasound Clinic I | 1 | | RSU 4523 – Ultrasound Clinical Education II | 3 | | RSU 4534 – Ultrasound Clinical Education III | 4 | | RSU 4544 – Ultrasound Clinical Education IV | 4 | | RSU 4551 – Sonography Clinical Relevancy | 1 | | RSU 4613 – Obstetric and Gynecologic Sonography | 3 | | RSU 4622 – Obstetric Sonography II | 2 | | RSU 4652 – Special Procedures in Sonography | 2 | | Total Diagnostic Medical Sonography option hours: | 44 | |  |  |  1. Magnetic Resonance Imaging option:  |  |  | | --- | --- | | RSMR 4703, MRI Safety and Instrumentation | 3 | | RSMR 4712, Imaging Information Management | 2 | | RSMR 4723, MRI Procedures I | 3 | | RSMR 4733, MRI Procedures II | 3 | | RSMR 4753, MRI Clinical Ed I | 3 | | RSMR 4763, MRI Clinical Education II | 3 | | RSMR 4773, MRI Clinical Education III | 3 | | RSMR 4803, MRI Physical Principles I | 3 | | RSMR 4813, MRI Physical Principles II | 3 | | RSMR 4823, Data Acquisition and Processing | 3 | | RSMR 4833, Advanced MRI Imaging | 3 | | Total Magnetic Resonance Imaging option hours: | 32 |  1. Mammography option:  |  |  | | --- | --- | | RS 4502, Mammography Procedures | 2 | | RS 4512, Mammography Instrumentation | 2 | | RS 4553, Mammography Clinical Education I | 3 | | RS 4563, Mammography Clinical Education II | 3 | | RSU 4213, Ultrasound Physics and Instrumentation I | 3 | | RSU 4323, Physics and Instrumentation II | 3 | | RSU 4833, Breast Sonography | 3 | | Total Mammography option hours: | 22 | |
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| --- | --- | --- |
| 1. Radiation therapy option:   RST 4203, Intro to Radiation Therapy | 3 | |
| RST 4214, Radiation Therapy Principles and Practice | 4 | |
| RST 4224, Radiation Therapy Principles and Practice II | 4 | |
| RST 4234, Radiation Therapy Principles and Practice III | 4 | |
| RST 4242, Rad Therapy Clinical Treatment Planning | 2 | |
| RST 4313, Radiation Physics I | 3 | |
| RST 4323, Radiation Physics II | 3 | |
| RST 4333, Applied Radiation Biology | 3 | |
| RST 4413, Rad Protection, Safety, and Quality Management | 3 | |
| RST 4513, Radiation Therapy Clinical Education I | 3 | |
| RST 4523, Radiation Therapy Clinical Education II | 3 | |
| RST 4533, Radiation Therapy Clinical Education III | 3 | |
| Total Radiation Therapy option hours:   1. Radiologic Technology  |  |  | | --- | --- | | 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 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 | | Total Radiologic Technology option hours: | 47 | | 38 | |
|  |  |
|  |  |
| 3 | |
| 4 | |
| 3 | |
| 2 | |
| 4 | |
| 4 | |
| 2 | |
| 4 | |
| 3 | |
| 3 | |
| 2 | |
| 3 | |
| 3 | |
| 3 | |
| 43 | |
|  |  | |

|  |  |
| --- | --- |
| 1. Medical Imaging Informatics |  |
| CIT 1503, Microcomputer Applications | 3 |
| CIT 2033, Programming Fundamentals | 3 |
| CIT 2523, Telecommunications and Networking | 3 |
| CIT 3013, Management Information Systems | 3 |
| CIT 3403, Database Management | 3 |
| CIT 4523, Advanced Telecommunications | 3 |
| CIT 4623, Computer Security | 3 |
| CIT 488V, Internship | 3 |
| RS 3142, Advanced Imaging and Therapy I | 2 |
| RS 3152, Advanced Imaging and Therapy II | 2 |
| RSMR 4712, Imaging Information Management | 2 |
| RSMR 4713, Imaging Standards of Communication and Interoperability | 3 |
| Total Medical Imaging Informatics option hours | 33 |

1. Total semester credit hours required for proposed program (Program range: 21-45 semester credit hours)
   * 1. Post-baccalaureate certificate in Medical Imaging and Therapy (core plus electives):
        1. Cardiovascular Interventional option: 23 hours
        2. Diagnostic Medical Sonography option: 44 hours
        3. Magnetic Resonance Imaging option: 32 hours
        4. Mammography option: 22 hours
        5. Radiation Therapy option: 38 credit hours
        6. Radiologic Technology option: 43 hours
        7. Medical Imaging Informatics: 33
2. New courses and new course descriptions
   * 1. All courses already exist
3. Program goals and objectives
   * 1. Program Goals
        1. Students will be clinically competent.
        2. Students will demonstrate communication skills.
        3. Students will develop critical thinking skills.
        4. Students will model professionalism.
4. Program Objectives
   * 1. Deliver optimal patient care based on imaging modality needs.
     2. Record and maintain patient charts.
     3. Practice radiation and MRI safety.
     4. Prescribe and perform imaging or treatment protocols.
     5. Identify various pathologies using medical imaging or therapy techniques.
     6. Understand the function of the equipment and associated accessories.
     7. Assist in calibration of equipment, quality assurance and/or treatment planning procedures.
     8. Participate in patient education programs.
5. Expected student learning outcomes
   * 1. Students will be able to perform imaging or treatment procedures accurately.
     2. Students will demonstrate written communication skills.
     3. Students will use effective oral communication skills.
     4. Students will adapt standard imaging or therapy techniques to varying clinical situations.
     5. Students will model professional ethics.
     6. Students will demonstrate professional conduct.
6. Documentation that program meets employer needs
   * + 1. Not applicable. This certificate is part of a viable degree program that meets employer’s needs.
7. Student demand (projected enrollment) for proposed program: 5 students/year
8. Program approval letter from licensure/certification entity, if required: N/A
   1. Name of institutions offering similar programs and the institution(s) used as model to develop proposed program
      * 1. Chattanooga State – Chattanooga, TN
        2. Thomas Jefferson University, Philadelphia, PA
9. Scheduled program review date (within 10 years of program implementation):
   * + 1. The American Registry of Radiologic Technologists requires coursework review and approval on an annual basis. All imaging and therapy programs are reviewed annually to meet these requirements.
10. Institutional curriculum committee review/approval date:
11. Will this program be offered on-campus, off-campus, or via distance delivery? If yes, indicate mode of distance delivery. On-campus
12. Identify off-campus location. Provide a copy of e-mail notification to other institutions in the area of the proposed off-campus program offering.
13. Provide additional program information if requested by ADHE staff.

President/Chancellor Approval Date:

Board of Trustees Notification Date:

Chief Academic Officer: Date: