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| For Academic Affairs and Research Use Only |
| Proposal Number: | NHP03 |
| CIP Code:  |  |
| Degree Code: |  |

 **Course Deletion 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.

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| Deanna Berryman | 11/10/2021 |

**Department Curriculum Committee Chair** |

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**COPE Chair (if applicable)** |
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| Cheryl DuBose | 11/10/2021 |

**Department Chair** |

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**Head of Unit (if applicable)**   |
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| Shanon Brantley | 1/24/2022 |

**College Curriculum Committee Chair** |

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**Undergraduate Curriculum Council Chair** |
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| Scott E. Gordon | 1/25/2022 |

**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** |

1. **Course Title, Prefix and Number**

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| --- | --- | --- |
| RSN | 300V | NUCLEAR MED PROG EXCHANGE |
| RSN | 4113 | NUCLEAR MEDICINE PHARMACY |
| RSN | 4213 | NUCLEAR MED PHYSICS AND INSTRUMENTATION |
| RSN | 4313 | NUCLEAR MEDICINE PROCEDURES |
| RSN | 4323 | NUCLEAR MED PROCEDURES II |
| RSN | 4513 | NUCLEAR MED CLINICAL EDUCATION I |
| RSN | 4523 | NUCLEAR MED CLINICAL EDUCATION II |
| RSN | 4535 | NUCLEAR MED CLINICAL EDUCATION III |
| RS | 3843 | ADV CLINICAL PRACTICE SKILLS |

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

Cheryl DuBose, cdubose@astate.edu, 972-2772

1. **Justification**

These courses are in the undergraduate bulletin, but are not associated with any of our BSRS concentration areas. These courses were identified by Jesse Blankenship as not being used since 2015. We would like to delete these courses in an effort to clean up the medical imaging and radiation sciences section of the bulletin.

1. **Last semester course will be offered**

Unknown

1. **Yes / No Does this course appear in your curriculum? (if yes, and this deletion changes the curriculum, a Program Modification Form is required)**

No

1. **Yes / No Is this course dual-listed (undergraduate/graduate)?**

No

1. **Yes / No Is this course cross-listed with a course in another department?**

If yes, which course(s)?

 No

1. **Yes / No Is there currently a course listed in the Bulletin or Banner which is a one-to-one equivalent to this course (please check with the Registrar’s Office if unsure)?**

If yes, which course?

No.

**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. Please include a before (with changed areas highlighted) and after of all affected sections.** **\*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.**  |

**BEFORE** - Page 595

**Renewable Energy Technology (RET)**

RET 3113. Fundamentals and Applications of Renewable Energy Fundamental principles and applications related to biofuels, wind, solar, hydrogen and other emerging alternative energy technologies along with their applications. Prerequisites, MATH 1023, and CHEM 1013 and CHEM 1011, or PHSC 1021 and PHSC 1203. Fall.

RET 4013. Process Technology for Agricultural Products Study of processing principles and applications in bio-energy industry: process parameters, properties of materials, transport processes, fluid flow, pumps, material handling, drying, extraction, fermentation, bioreactor, sanitation and process economics. Prerequisites, MATH 1023, CHEM 1013, and CHEM 1011. Process instrumentation or equivalent course as approved by instructor also required. Spring.

RET 4023. Advanced Bioenergy  A study of processes and developments in the biofuels and other emerging technology for biobased energy products. Prerequisites, MATH 1023, CHEM 1013, CHEM 1011 and RET 3113, or instructor permission. Fall.

RET 4113. Advanced Renewable Energy Systems A study of renewable energy systems including technologies for solar, hydrogen, fuel cell, biomass and wind. Prerequisites MATH 1023, CHEM 1013, CHEM 1011 and RET 3113, or instructor permission. Spring.

RET 4123.  Energy Conservation and Efficiency A study of energy and power measurement techniques to analyze energy use, and methods to conserve energy in residential and industrial sectors. Prerequisites, PHYS 2054 and CS 1013, or RET 3113; or instructor permission. Fall.

RET 4313. Wind Energy Technology A study of wind energy fundamentals and processes for converting wind power with emphasis on turbines and the wind power systems. Prerequisites, PHYS 2054 or RET 3113; or instructor permission. Spring.

**Radiologic Sciences (RS)**

RS 3122. Legal and Regulatory Environment of Radiology Introduction to the growing legal and regulatory requirements being placed on radiology departments and professionals. Content includes American College of Radiology. Joint Commission on Accreditation of Healthcare Organizations, Food and Drug Administration, and state regulatory regulations as well as other legal considerations regarding personnel, operations and staffing. Prerequisite, formal acceptance in to the professional program. Fall, Summer.

RS 3142. Advanced Imaging and Therapy I Foundation information on the physics, instrumentation, and clinical procedures for digital imaging, computed tomography, magnetic resonance imaging, diagnostic medical sonography equipment as well as an overview of quality management concepts. Fall.

RS 3152. Advanced Imaging and Therapy II Foundation information on the physics, instrumentation, and clinical procedures for cardiovascular interventional technology, mammography, bone densitometry, nuclear medicine, and radiation therapy. Spring.

RS 3633. Pediatric Considerations in Radiology Practice standards utilized in pediatric radiology including accepted methods of immobilization, patient care and techniques. Prerequisite, formal acceptance in to the professional program. Summer.

RS 3733. Geriatric Considerations in Radiology Psychosocial, emotional, mental and psychiatric issues encountered in the aging process with attention to normal processes of aging, common interventions, and treatments. Spring, Summer.

~~RS 3843. Advance Clinical Practice Focus is on current healthcare delivery environment including patient assessment, monitoring, infection control, and management. It includes working with multicultural patients, managing problem patients, and patient education. Prerequisite, Admission to the Imaging Specialist program. Spring.~~

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RSMR 4723. MRI Procedures I Provides knowledge of anatomy, pathology, scanning protocols, contrast administration, and contraindications for magnetic resonance imaging of the head, spinal column, and musculoskeletal system. Prerequisite, formal acceptance in to the professional program. Spring.

RSMR 4733. MRI Procedures II Provides knowledge of anatomy, pathology, scanning protocols, contrast administration, and contraindications for magnetic resonance imaging of the abdomen, pelvis, and musculoskeletal system. Prerequisite, formal acceptance in to the professional program. Summer.

RSMR 4753. MRI Clinical Education I The course will provide beginning level content and clinical practice experiences designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in magnetic resonance imaging. Prerequisite, formal acceptance in to the professional program. Fall.

RSMR 4763. MRI Clinical Education II The course will provide intermediate level content and clinical practice experiences designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in magnetic resonance imaging. Prerequisite, formal acceptance in to the professional program. Spring.

RSMR 4773. MRI Clinical Education III The course will provide advanced level content and clinical practice experiences designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in magnetic resonance imaging. Prerequisite, formal acceptance in to the professional program. Summer.

RSMR 4783. MRI Clinical Education IV The course will provide advanced level content and clinical practice experiences designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in magnetic resonance imaging. Prerequisite, formal acceptance in to the professional program.. Summer.

RSMR 4803. MRI Physical Principles I Introduction of the concepts of basic physics and instrumentation for magnetic resonance imaging. Topics include nuclear magnetism, the Larmour equation, tissue characteristics, and imaging parameters. Prerequisite, formal acceptance in to the professional program. Spring.

RSMR 4812. MRI Pharmacology Provides knowledge of types of contrast media, contraindications, dose calculation, administration routes, affects on the MRI image, patient care and assessment. Prerequisite, formal acceptance in to the professional program. Summer.

RSMR 4813. MRI Physical Principles II Exploration of imagining options, spin echo, fast spin echo, STIR, FLAIR, gradient imagining, and echo planar imaging. Includes a comprehensive analysis of image artifacts. Prerequisite, formal acceptance in to the professional program. Summer.

RSMR 4823. Data Acquisition and Processing A study of the patient coordinate system and spatial localization, magnetic resonance imaging gradient system, data manipulation, and quality control practices in MRI. Prerequisite, formal acceptance in to the professional program. Spring.

RSMR 4833. Advanced MRI Imaging Anatomy, pathology, scanning protocols, contrast administration, and contraindications for magnetic resonance angiography, venography, functional imaging, dynamic imaging, and cardiac imaging. Prerequisite, formal acceptance in to the professional program. Summer.

**~~Nuclear Medicine (RSN)~~**

~~RSN 300V. Nuclear Medicine Program Exchange Clinical Preceptorship to be taken concurrently while enrolled in the nuclear medicine program. Prerequisite, formal acceptance in to the professional program. Fall, Spring, Summer.~~

The bulletin can be accessed at https://www.astate.edu/a/registrar/students/bulletins/

**BEFORE SECTION CONT’D** - Page 600

~~RSN 4113. Nuclear Medicine Pharmacy  This course focuses on the study of the chemical and biological aspects of radiopharmaceuticals, radionuclides, radioactive decay, and the preparation and quality control of radiopharmaceuticals. Clinical procedure information for magnetic resonance imaging studies. Prerequisite, formal acceptance in to the professional program. Spring.~~

~~RSN 4213. Nuclear Medicine Physics and Instrumentation This course focuses on the study of nuclear medicine physics, especially radionuclide production and detection, counting statistics, energy spectrum analysis, and scintillation imaging systems. Prerequisite, formal acceptance in to the professional program. Fall.~~

~~RSN 4313. Nuclear Medicine Procedures I This course focuses on the study of nuclear medicine clinical procedures for in vivo and in vitro studies, related anatomic studies, and associated physiologic pathologic conditions. Prerequisite, formal acceptance in to the professional program. Fall.~~

~~RSN 4323. Nuclear Medicine Procedures II This course focuses on the continued study of nuclear medicine clinical procedures for in vivo and in vitro studies, related anatomic studies, and associated physiologic pathologic conditions. Prerequisite, formal acceptance in to the professional program. Spring.~~

 ~~RSN 4513. Nuclear Medicine Clinical Education I The course will provide beginning level content and clinical practice experiences designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in nuclear medicine procedures. Prerequisite, formal acceptance in to the professional program. Fall.~~

~~RSN 4523. Nuclear Medicine Clinical Education II The course will provide intermediate level content and clinical practice experiences designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in nuclear medicine procedures. Prerequisite, formal acceptance in to the professional program. Spring.~~

~~RSN 4535. Nuclear Medicine Clinical Education III The course will provide advanced level content and clinical practice experiences designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in nuclear medicine procedures. Prerequisite, formal acceptance in to the professional program. Summer.~~

**Radiation Therapy (RST)**

RST 4203. Introduction to Radiation Therapy and Patient Care This course will provide an overview of the foundations of radiation therapy and the practitioners role in the health care delivery system. Prerequisite, formal acceptance in to the professional program. Fall.

RST 4214. Radiation Therapy Principles and Practice I The course will provide a knowledge base for assessing, comparing, contrasting and recommending the type of radiation therapy equipment, procedure and technique, patient positioning and immobilization for appropriate tumor localization and treatment delivery. Prerequisite, formal acceptance in to the professional program. Fall.

RST 4224. Radiation Therapy Principles and Practice II The course will examine and evaluate the management of specific neoplastic disease. Prerequisite, formal acceptance in to the professional program. Spring.

RST 4234. Radiation Therapy Principles and Practice III The course will build on the foundations of the principles of radiation therapy practice from the two previous courses. Prerequisite, formal acceptance in to the professional program. Summer.

RST 4242. Radiation Therapy Clinical Treatment Planning  The course will build on the foundations of the principles of radiation therapy practice from the two previous courses. Prerequisite, formal acceptance in to the professional program. Summer.

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