Code # NHP 20

**New Course Proposal Form**

**[X] Undergraduate Curriculum Council**

**[ ] Graduate Council**

|  |
| --- |
| **[ X] New Course or [ ]Experimental Course (1-time offering) (Check one box)** |

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 10/27/2016 **Department Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **COPE Chair (if applicable)** |
| Ray Winters 10/27/2016 **Department Chair:** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **General Education Committee Chair (If applicable)** |
| Deanna Barymon 10/27/2016 **College Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Undergraduate Curriculum Council Chair** |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 10/27/2016 **College Dean** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Graduate Curriculum Committee Chair** |
|  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Vice Chancellor for Academic Affairs** |

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

Donna Caldwell

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

(870) 972-2952

2. Proposed Starting Term and Bulletin Year

Spring 2018

3. Proposed Course Prefix and Number (Confirm that number chosen has not been used before. For variable credit courses, indicate variable range. *Proposed number for experimental course is 9*. )

RS 4433

4. Course Title – if title is more than 30 characters (including spaces), provide short title to be used on transcripts. Title cannot have any symbols (e.g. slash, colon, semi-colon, apostrophe, dash, and parenthesis). Please indicate if this course will have variable titles (e.g. independent study, thesis, special topics).

Cardiac Equipment and Intervention

Short Title: Cardiac Equipment

5. Brief course description (40 words or fewer) as it should appear in the bulletin.

Overview of cardiac catheterization main and ancillary equipment and disease intervention

6. Prerequisites and major restrictions. (Indicate all prerequisites. If this course is restricted to a specific major, which major. If a student does not have the prerequisites or does not have the appropriate major, the student will not be allowed to register).

1. Are there any prerequisites? NO
   1. If yes, which ones?

Enter text...

* 1. Why or why not?

Enter text...

1. Is this course restricted to a specific major? Yes
   1. If yes, which major? Radiologic Sciences

7. Course frequency(e.g. Fall, Spring, Summer). *Not applicable to Graduate courses.*

Spring

8. Will this course be lecture only, lab only, lecture and lab, activity, dissertation, experiential learning, independent study, internship, performance, practicum, recitation, seminar, special problems, special topics, studio, student exchange, occupational learning credit, or course for fee purpose only (e.g. an exam)? Please choose one.

Lecture

9. What is the grade type (i.e. standard letter, credit/no credit, pass/fail, no grade, developmental, or other [please elaborate])

Standard Letter

10. Is this course dual listed (undergraduate/graduate)?

NO

11. Is this course cross listed? (If it is, all course entries must be identical including course descriptions. It is important to check the course description of an existing course when adding a new cross listed course.)

NO

1. If yes, please list the prefix and course number of cross listed course.

Enter text...

1. Are these courses offered for equivalent credit? Yes / No

Please explain. Enter text...

12. Is this course in support of a new program? No

a. If yes, what program?

Enter text...

13. Does this course replace a course being deleted? No

a. If yes, what course?

Enter text...

14. Will this course be equivalent to a deleted course? No

a. If yes, which course?

Enter text...

15. Has it been confirmed that this course number is available for use? Yes

*If no: Contact Registrar’s Office for assistance.*

16. Does this course affect another program? No

If yes, provide contact information from the Dean, Department Head, and/or Program Director whose area this affects.

Enter text...

**Course Details**

17. Outline (The course outline should be topical by weeks and should be sufficient in detail to allow for judgment of the content of the course.)

Weeks1-3: Main Cardiac Equipment

Weeks 4-8: Ancillary Equipment

Weeks 9-14: Cardiac Intervention

18. Special features (e.g. labs, exhibits, site visitations, etc.)

Enter text...

19. Department staffing and classroom/lab resources

No additional resources needed

1. Will this require additional faculty, supplies, etc.?

No

20. Does this course require course fees? No

*If yes: please attach the New Program Tuition and Fees form, which is available from the UCC website.*

**Course Justification**

21. Justification for course being included in program. Must include:

a. Academic rationale and goals for the course (skills or level of knowledge students can be expected to attain)

An upper division didactic course which provides an opportunity for the CIT students to learn detailed main and ancillary cardiac equipment. Cardiac intervention procedures will be included following understanding of ancillary equipment

b. How does the course fit with the mission established by the department for the curriculum? If course is mandated by an accrediting or certifying agency, include the directive.

The mission of the programs in medical imaging and radiation sciences is to produce competent entry level practitioners. RS 4433 will include added education involving cardiac catheterization procedures providing the student with multimodality knowledge.

c. Student population served.

Cardiovascular Interventional Technology Students

d. Rationale for the level of the course (lower, upper, or graduate).

RS 4433 is an upper level course for an educational experience tailored to students who have completed the radiologic technology portion of the program and are involved in the cardiac catheterization portion of the CIT track. The CIT track is taken the final year of the baccalaureate program.

**Assessment**

**University Outcomes**

22. Please indicate the university-level student learning outcomes for which this new course will contribute. Check all that apply.

|  |  |  |
| --- | --- | --- |
| * 1. **[ X]** Global Awareness | * 1. **[X ]** Thinking Critically | * 1. **[ ]** Information Literacy |

**Relationship with Current Program-Level Assessment Process**

23. What is/are the intended program-level learning outcome/s for students enrolled in this course? Where will this course fit into an already existing program assessment process?

1. Students will be clinically competent

2. Students will communicate effectively with peers, medical staff, and patients

3. Students will demonstrate professional behavior and attitudes

24. Considering the indicated program-level learning outcome/s (from question #23), please fill out the following table to show how and where this course fits into the program’s continuous improvement assessment process.

*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.*

|  |  |
| --- | --- |
| **Program-Level Outcome 1 (from question #23)** | Students will be clinically competent |
| Assessment Measure | Clinical competencies and clinical CI evaluation forms |
| Assessment  Timetable | Spring |
| Who is responsible for assessing and reporting on the results? | Program Faculty |
| **Program-Level Outcome 2 (from question #23)** | Students will communicate effectively with peers, medical staff and patients |
| Assessment Measure | Clinical CI evaluation forms and classroom participation in learning activities |
| Assessment  Timetable | Spring |
| Who is responsible for assessing and reporting on the results? | Program Faculty |
| **Program-Level Outcome 3 (from question #23)** | Students will demonstrate professional behavior and attitudes |
| Assessment Measure | Clinical CI evaluation forms and classroom participation in learning activities |
| Assessment  Timetable | Spring |
| Who is responsible for assessing and reporting on the results? | Program Faculty |

**Course-Level Outcomes**

25. What are the course-level outcomes for students enrolled in this course and the associated assessment measures?

|  |  |
| --- | --- |
| **Outcome 1** | Students will demonstrate acceptable problem solving skills |
| Which learning activities are responsible for this outcome? | Identification and Understanding of Cardiac Equipment  Identification and Understanding of Ancillary Equipment  Identification and Understanding of Intervention equipment and procedures |
| Assessment Measure | Examinations |
| **Outcome 2** | Students will analyze cardiac arrhythmias as demonstrated on ECG |
| Which learning activities are responsible for this outcome? | In-depth ECG study  Identification of cardiac rhythms |
| Assessment Measure | Mock procedures, case studies and examinations |
| **Outcome 3** | Students will explain cardiac procedures to the patient |
| Which learning activities are responsible for this outcome? | Case Studies  Case presentations  Cardiac procedure examinations |
| Assessment Measure | Case Studies and Examinations |

**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 533

RS 4343. Radiologic Administrative Concepts Introduction to the organization, operations, and management of a radiology department. Includes an introduction to health care delivery systems, decision making, and the management functions. Prerequisite, formal acceptance in to the professional program. Fall, Spring.

RS 436V. Independent Study in Radiologic Sciences Guided investigation of an advanced radiologic topic selected in consultation with a member of the radiologic sciences faculty. May be repeated with different topics for a total of 6 semester credits. Prerequisite, formal acceptance in to the professional program. Demand.

RS 4413 Cardiovascular Equipment and Intervention Emphasis of cardiovascular intervention equipment. Cardiovascular disease intervention is also covered. Prerequisite, formal acceptance into the professional program.

Fall

RS 4423. Cardiovascular-Interventional Procedures and Instrumentation The course will discuss angiography and interventional procedures. The student will be introduced to the specialized equipment required to produce and acquire the images and for monitoring the patient. Patient care procedures, medical and legal implications, and pharmaceutical and contrast agents specific to each examination will be defined. Prerequisite, formal acceptance in to the professional program. Fall.

RS 4433 Cardiac Equipment and Intervention Overview of cardiac catheterization main and ancillary equipment and disease intervention. Prerequisite, formal acceptance into the professional program. Spring

RS 444~~2~~3. Cardiac Physiology and Procedures This course emphasizes cardiac anatomy and physiology, electrocardiography, ECG, instrumentation, procedural performance, and elementary interpretation. Diagnostic imaging procedures and interventional therapies related to coronary disease and dysfunction are also presented. Hands on experience with ECG equipment will be introduced. Prerequisite, formal acceptance in to the professional program. Spring.

RS4444 Cardiac Clinic Clinical practice experiences designed for development, application, and evaluation of concepts and theories in cardiac catheterization procedures preparing CIT students for entry level practice. Prerequisites, formal admission to the professional program. Spring.

RS 445~~3~~4. Cardiovascular Interventional Clinical Education ~~The course will provide content and clinical practice experiences designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in cardiovascular-interventional radiology.~~ Clinical practice experiences designed for development, application, and evaluation of concepts and theories in cardiovascular-interventional radiology preparing CIT students for entry level practice. Prerequisites, formal admission to the professional program. Fall~~, Spring, Summer.~~

RS 4463. Statistics for Medical Imaging Methods used for data collection and statistical analysis in medical imaging procedures and education with a focus on the applications of data and statistics in reporting of clinical efficiency, image repeat rates, and educational outcomes. Fall, Spring.

RS 4464. Cardiovascular Interventional Internship Guided clinical practice to develop, apply, analyze, integrate, synthesize and evaluate concepts and theories in cardiovascular-interventional radiology. Prerequisite, Admission to the Radiologic Science Program. Summer.

RS 4512. Mammography Instrumentation Components, operation and purpose of specialized mammographic equipment, including mammographic x-ray tube, digital imaging, automatic exposure control, image recording options, and laser readers. Prerequisite, Admission to the Radiologic Science Program. Summer.

RS 4502. Mammography Procedures Clinical concepts and applications of the various mammographic procedures performed and equipment used in the mammography suite, emphasizes the understanding of the equipment and the performance of all procedure. Prerequisite, Admission to the Radiologic Science Program. Spring.

RS 4532. Mammography Procedures and Instrumentation This course is designed to introduce the student to the technical and procedural aspects of mammography. Various aspects of mammography, breast anatomy, patient interaction and exam procedures will be covered. Prerequisite, formal acceptance in to the professional program. Spring.

RS 4553. Mammography Clinical Education I Guided clinical practice experiences to develop, apply, analyze, integrate, synthesize and evaluate concepts and theories in mammography. Prerequisite, Admission to the Radiologic Science Program. Spring.

RS 4563. Mammography Clinical Education II Guided clinical practice experience designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in mammography. Prerequisite, Admission to the Radiologic Science Program. Summer.

RS 4623. Computed Tomography Instrumentation Components, operation and purpose of specialized Computed Tomography equipment, including computer mechanisms, imaging theory and equipment operation. Prerequisite, Admission to the Radiologic Science Program. Summer. RS 4633. Computed Tomography Procedures Anatomy, pathology, scanning protocols, contrast administration, and contraindications for all CT procedures. Prerequisite, Admission to the Radiologic Science Program. Fall.

Page 332

Major in Radiologic Sciences Bachelor of Science in Radiologic Sciences

Emphasis in Computed Tomography/Cardiovascular-Interventional Technology

A complete 8-semester degree plan is available at http://registrar.astate.edu/.

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 Laboratory

PSY 2013, Introduction to Psychology

COMS 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, 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 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 (CT/CIT): Sem. Hrs.

RS 3122, Legal & Regulatory Environment of Radiology 2

RS 3733, Geriatric Considerations in Radiology 3

RS 4343, Radiologic Administrative Concepts 3

RS 4413 Cardiovascular Equipment and Intervention 3

RS 4423, Cardiovascular-Interventional Procedures and Instrumentation 3

RS 4433, Cardiac Equipment and Intervention 3

RS 444~~2~~3, Cardiac Physiology and Procedures ~~2~~ 3

RS 4443, Stats for Medical Imaging 3

RS 4444, Cardiac Clinic 4

RS 445~~3~~4, Cardiovascular-Interventional Clinical Education ~~3~~4

RS 4464, Cardiovascular-Interventional Internship 4

~~RS 4622, CT Instrumentation 2~~

~~RS 4632, CT Procedures 2~~

~~RS 4644, CT Clinical Ed 4~~

RS 4822, Psychosocial Factors in Healthcare 2

RSMR 4712, Imaging Information Management 2

Sub-total ~~35~~ 39

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: ~~134~~138