

**Washington State University**  
**MAJOR CHANGE FORM – REQUIREMENTS**

**NOTE:** If proposing a new program (degree) or **extending, moving, consolidating, eliminating or renaming** an existing program (degree), these proposals must first go through the Provost's Office review process. Please do not use this form. Please contact the Provost's Office for directions on processing program (degree) proposals.

**SUBMITTING PROPOSAL** – Follow the steps on form, then:

- Submit one electronic copy of complete packet of signed form/rationale statement/supporting documentation and/or edits to [wsu.curriculum@wsu.edu](mailto:wsu.curriculum@wsu.edu).
- Send the **original stapled packet PLUS 10 stapled copies** of packet to the **Registrar's Office**, campus mail code 1035.

**Department Name** School of Environment

**1. Check proposed changes:**

- New Plan (Major) in \_\_\_\_\_ CIP# \_\_\_\_\_
- Change name of Plan (Major) from \_\_\_\_\_ to \_\_\_\_\_
- Revise certification requirements for the Plan (Major) in \_\_\_\_\_
- Revise Plan (Major) requirements in \_\_\_\_\_
- Drop Plan (Major) in \_\_\_\_\_
  
- New Sub-Plan (Option) in \_\_\_\_\_ CIP# \_\_\_\_\_
- Change name of Sub-Plan (Option) from \_\_\_\_\_ to \_\_\_\_\_
- Revise requirements for the Sub-Plan (Option) in \_\_\_\_\_
- Drop Sub-Plan (Option) in \_\_\_\_\_
  
- New Minor in \_\_\_\_\_ CIP# \_\_\_\_\_
- Change name of Minor from \_\_\_\_\_ to \_\_\_\_\_
- Revise Minor requirements in \_\_\_\_\_
- Drop Minor in \_\_\_\_\_
  
- New Certificate in Graduate Certificate in Radiation Protection CIP# 51, 2205
- Change name of Certificate from \_\_\_\_\_ to \_\_\_\_\_
- Revise Certificate requirements in \_\_\_\_\_
- Drop Certificate in \_\_\_\_\_
- Other \_\_\_\_\_



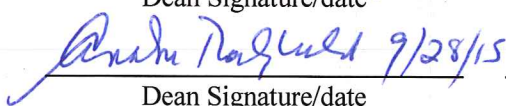
**2. Effective Date:** Fall 2016 (Effective date must be for future fall term.) **Submission deadline is Oct 1<sup>st</sup>**  
**NOTE:** Items received after deadlines may be put to the back of the line or forwarded to the following year. Please submit on time.

**Contact:** James R Pratt Phone number: (509) 372-7212  
Email: jrpratt@tricity.wsu.edu Campus mail code: \_\_\_\_\_

**3. PLEASE ATTACH A RATIONALE STATEMENT** giving the reasons for each request marked above, and explaining how this impacts other units in Pullman and other campuses (if applicable).

**4. PROVIDE SUPPORTING DOCUMENTATION AND/OR CURRENT CATALOG COPY** with edit marks showing requested changes.

**5. SIGN AND DATE APPROVALS.**

 _____ Chair Signature/date	 _____ Dean Signature/date	_____ CSC Date	
_____ Chair Signature/date	 _____ Dean Signature/date	_____ AAC or GSC Date	_____ Senate Date

## **Graduate Certificate in Radiation Protection**

School of the Environment

College of Arts and Sciences/College of Agricultural, Human, and Natural Resource Sciences

This proposal represents a request to add a new graduate certificate program in radiation protection to be delivered through the WSU Tri-Cities campus. This request requires the revision of one existing course and the creation of four new courses—all in the area of Environmental Sciences—that comprise the new program.

### **1. Statement of Need**

The demand for radiation protection professionals is very strong. Radiation protection professionals are needed as the U.S. Dept. of Energy (DOE) continues to cleanup and remediate sites around the nation, including sites such as the Hanford nuclear reservation. Additionally, new jobs in radiation protection are being created in the fields of homeland security, medicine (diagnostics, therapy), and nuclear power.

As the current workforce ages, the need for radiation protection professionals is increasing. The Health Physics Society, the national professional organization representing those working in the field of radiation safety, describes a “human capital crisis in radiation safety.” “With expanding uses of radiation in diagnostic and therapeutic medical applications and the potential expansion of nuclear technology to meet the nation’s future energy needs,” it noted in October 2008, “it is clear to the radiation safety community that the current imbalance between supply and demand will significantly worsen in the near term, after which it will soon become untenable. The shortage of qualified radiation safety professionals will compromise the rigorous oversight necessary for the continued safe use of radiation for the benefit of the citizens of the United States.” (See <http://hps.org/hpspublications/positionstatements.html>.)

### **2. Summary of the program**

Those who earn the graduate certificate must

- Be admitted to the graduate school in the certificate program or to an SOE graduate program.
- Complete ENVR SCI 406 Introduction to Radiological Science (3 cr, revised)
- Complete any 3 of the following 4 courses
  - ENVR SCI 520 Radiation Instrumentation (3 cr)
  - ENVR SCI 521 Uses of Radiation and Radioactive Material and Their Regulation (3 cr)
  - ENVR SCI 522 Radiation Biology and Ecology (3 cr)
  - ENVR SCI 523 Environmental and Internal Dosimetry (3 cr)

Note: Undergraduates meeting the prerequisites may enroll in these courses with permission but may not earn the certificate.

Those earning the graduate certificate will help provide needed manpower in radiation protection. Graduates of the certificate program will have competency in the fundamentals of radiological science and the application of radiation protection principles so that they may work effectively on radiation protection projects, under the supervision of a radiation protection professional.

### **3. Cost**

The cost to WSU to establish this program will be minimal. The U.S. Dept. of Energy, Office of Environmental Management, has given WSU/TC a “workforce restructuring” grant to fund the design and start-up of this new certificate program. The grant is in its second year and will support class offerings as early as Fall 2014. Initially, all courses will be taught by current adjunct faculty, taking advantage of radiation protection professionals with international and national standing. There are 78 certified health physicists in the Tri-Cities, many of whom hold Ph.D.’s, including professionals who have served on the National Council on Radiation Protection and Management (NCRP) in the past 2 decades and who are serving or have served on the International Commission on Radiation Protection and other international bodies. The courses will be offered via AMS to Pullman, Vancouver, and Tri-Cities.

### **4. Library**

Existing library capacity has supported the teaching of ENVR SCI 406 and previous offerings in radiation biology. Existing collections of books and periodicals and existing library staff will be adequate to support teaching the new courses that have subject areas similar to the previously offered courses. The WSU Tri-Cities library, part of the WSU library system, is shared with the Pacific Northwest National Laboratory library, further expanding holdings. The WSU Tri-Cities library also holds a donated special collection of radiation safety resources.

### **5. Student groups and recruitment**

There are at least three groups of students who will be the target of recruitment. Recruitment strategies will be somewhat different for each group.

- Local students - WSU Tri-Cities serves a significant number of science and engineering graduate students with interests in environmental health and safety. These students are the most proximate group to be served by the certificate program and will be recruited by direct contact.
- WSU-system students – Previous experience with a graduate certificate program in nuclear engineering shows clear evidence of student interest in related topics. The courses in the

program will be available to WSU students at other locations. These students will be recruited through direct contact similar to students already enrolled at WSU Tri-Cities and through contacts with faculty in the School of Environment.

- “National” students - Nuclear and other radiologically-related professionals in the Tri-Cities will be recruited by contacting radiation protection professionals in local organizations, such as Hanford contractors, Battelle, the Department of Energy, and the State of Washington/Department of Ecology. The national group may contain early- to mid-career professionals in other technical fields. This group will also be recognized by participating in recruiting and career awareness activities of the Health Physics Society.

## **6. Admission standards**

All students not admitted to a graduate program will be admitted as “Not-Advanced-Degree-Candidates” (NADC) as defined by the Graduate School. All pre-requisite coursework, if applicable, must be completed before entering the program.

## **7. Other requirements**

Courses taught under the certificate program will be graded, and a student may not obtain less than a B in each course to fulfill the certificate program requirements. No S/F courses will be used or counted for the certificate.

Students seeking the certificate will be required to be enrolled during the term the certificate is awarded and to pay the graduate certificate fee.