The following pages detail the requirements for you to become a radiation worker on campus, have radiation dosimetry issued to you and then use X-ray equipment:

1. You must complete the EHS online training course entitled: Radiation Producing Devices and score at least 80% on the quiz to pass the training session. See: https://safety.uncc.edu/training/training-registration/research-laboratory-environment-training-courses for information on how to access and complete the training.

2. You must complete a laboratory specific discussion and overview of the specific X-ray usage manual as they pertain to the laboratory to be provided by the Authorized User. This is to include a review of specific UNC Charlotte Radiation Safety documents including: Handbook for Radiation Safety, Emergency Procedures, and Material Security & Loss/Theft Procedure. The Authorized User is responsible for ensuring that his/her radiation workers have received adequate instruction in safety principles applicable to the X-ray unit.

3. You must complete the forms detailing any previous known radiation exposure that you have had and provide all associated radiation exposure records.

4. You must review, the NRC Instructions Concerning Fetal Exposure and the University Fetal Protection Policy and sign that you acknowledge the fetal protection policy on the final page.

Please forward all of the completed paperwork to the EHS Office. Please contact the Radiation Safety Officer at (704) 687-1111 if you have any questions with this process.
Online Radiation Safety Training – please complete the online radiation safety course entitled: Radiation Producing Devices that is accessible at the EHS website: https://safety.uncc.edu/training/training-registration/research-laboratory-environment-training-courses. The training takes approximately 45 minutes and there is a 20 question quiz at the end of the session.

**Radiation Overview**
- Radioisotopes / Half lives / Applications
- Four Primary Types of Ionizing Radiation

**Personnel Protection and Monitoring**
- ALARA – As Low as Reasonably Achievable
- Inverse Square Law
- Time and Distance
- Shielding for types of ionizing radiation (including tenth value layers)
- Non-Ionizing Radiation

**Health Hazards Associated With Radiation**
- DNA and Radiation
- Ionizing Radiation at the Cellular Level
- Radiosensitivity of cells, tissues and organs
- Damage of high doses of radiation
- Acute and Chronic Exposures
- Radiation – Units of Measurement
- Dose Limits & Typical Doses
- Natural and Manmade Sources

**Radiation Usage**
- Handbook for Radiation Safety and Nuclide Safety Data Sheets
- Authorized Users
- Radiation Workers
- Dosimetry Program – Dosimetry Do’s & Don'ts
- Ordering Radionuclides
- Radioactive Material Recordkeeping
- Security
- Surveys
- Emergency Response - Spills

**Online Training Completion**
Name: _____________________    Authorized User: _____________________    Department: _____________________

Completed by Radiation Safety Officer

Quiz Score: _______________    Date of Completion: ____________
RADIATION WORKER – RADIATION AWARENESS ORIENTATION

LABORATORY SPECIFIC XRAY EQUIPMENT USAGE TRAINING

X-ray Machine Designation: ________________________________

Building: __________________ Room: ________________

This program applies to all personnel (student, faculty and staff) wishing to operate X-ray machines.

I. Objective: To become acquainted and comfortable with the safe operation of the radiation producing equipment listed above through the following steps:

   A. Familiarity with the safe operation of X-ray equipment.
   B. Familiarity with the emergency shut-down procedures for X-ray machines.

II. Specific Training Steps:

   A. Understanding of the x-ray diffraction, spectroscopic or radiographic techniques used by the machine designated above.
   B. Overall operation of the x-ray machine (Reading Assignment - Operational Manual for the X-ray machine designated above)
   C. X-ray warning lights
   D. Emergency shut-off procedure
   E. Use of whole body and ring badge dosimetry
   F. Use of radiation shields and shutters, if applicable by unit
   G. Use of radiation survey meters
   H. Record keeping.

I have received the Radiation Safety Orientation as outlined above and agree to comply with all UNC Charlotte procedures and State requirements governing the use of this X-ray equipment.

Name: __________________________ Signature: __________________________ Date: __________________________

Department: __________________________________________

Authorized User: ________________________________________

Xray packet for Female -- 11/2017
RADIATION WORKER

PRIOR RADIATION DOSE DECLARATION

Please check applicable statement:

☐ 1) I have no prior occupational dose during the current calendar quarter.

☐ 2) I may have received the following occupational dose during the current calendar quarter (list the nature and amount of dose).*

My lifetime cumulative exposure is: ____________________________.

My current year annual exposure is: ____________________________.

My current quarter exposure is: ____________________________.

(If unknown, indicate unknown, do not leave blank)

________________________________________  __________________________________
Date                                           Signature

*If you indicated No. 2, then you must complete a "Radiation Exposure History" form for each place of employment at which you received an occupational dose, indicating current cumulative exposure.
RADIATION WORKER

RADIATION EXPOSURE HISTORY

Name: ___________________________ University ID Number: _______ - _______ - _______

Birth date: _______/_______/_______ Department: ________________________________

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I assert that this is a complete listing of my prior radiation employment and I request that the prior employer(s), listed above, release my radiation exposure history to the UNC Charlotte EHS Office.

________________________________________________________________________

DATE SIGNATURE

Xray packet for Female -- 11/2017  6
RAS FORM 2
APPLICATION FOR FILM BADGE OR TLD RING SERVICE

1. Full name of applicant: ____________________________________________________________

2. University ID number: ____________________________________________________________

3. Date of birth: ___________________________________________________________________

4. Gender: _______________________________________________________________________

5. Department: _____________________________________________________________________

6. Authorized User: __________________________________________________________________

7. Isotopes used: ___________________________________________________________________

8. Location and description of use: ____________________________________________________

9. TLD Ring? (see section 2.5 B of the Handbook for Radiation Safety) yes ___ no ___ / Ring Size _____

10. List coverage by all film badge services at locations other than UNC Charlotte: __________

__________________________________________________________________________________

The applicant certifies that all information contained herein is true and correct to the best of his or her knowledge.

Signatures:

Date: ___________________________  Applicant:__________________________________________

Date: ___________________________  Authorized User:____________________________________

Date: ___________________________  Radiation Safety Officer:______________________________
The North Carolina Regulations for Protection Against Radiation (10A NCAC 15, Section. 1610) requires that the dose to an embryo/fetus during the entire pregnancy of a declared pregnant woman not exceed 0.5 rem due to occupational exposures.

This limit is one-tenth the annual limit for occupational exposure. To benefit from this limit, it is required that female employees formally notify the employer of pregnancy in writing.

Please complete the section below and return to the Environmental Health and Safety Office if you choose to make this voluntary notification.

Otherwise, please indicate that you have reviewed this information by completing the last section and return to the Environmental Health and Safety Office.

I understand that it is the fundamental responsibility of the pregnant worker to decide when or whether she will formally declare her pregnancy to her employer. I hereby choose to make this formal notification.

Signature __________________________________ Date: ________________

Name (please print): ________________________________________________

Expected delivery date: _____________________________________________

I have reviewed a copy of the NRC Guide 8.13 (Instruction Concerning Prenatal Radiation Exposure) and the UNC Charlotte Fetal Protection Policy.

Signature:________________________________________ Date: ________________

Name (please print):_________________________________________________