NC STATE UNIVERSITY

Graduate Certificate in *Nuclear Nonproliferation Science and Policy*

There is a demand in the government, private, and academic sectors for experts with an interdisciplinary education in both the science enabling nuclear nonproliferation regimes and the policies that create and implement those regimes. North Carolina State University (NCSU) has created an interdisciplinary graduate certificate program in Nuclear Engineering and Political Science focused on *Nuclear Nonproliferation Science and Policy* to meet this demand.

The Certificate Program

The objective of the program is to educate students and post-graduate professionals about nuclear nonproliferation from both the social science and the engineering perspectives. Students will develop an in-depth understanding of the technical and policy challenges to developing and implementing robust international nuclear nonproliferation regimes. Their education will be supported by assignments designed to reinforce understanding of that subject matter, class projects which cover key areas such as proliferation case studies and physical security simulations, as well as interactions with subject matter experts in nuclear nonproliferation technology and policy.

This certificate program is open to degree-seeking students at NCSU, students at other institutions of higher education, and post-graduate professionals seeking to expand their educational credentials.

Requirements

To earn the certificate, you will complete an interdisciplinary mix of four semester-long courses in Nuclear Engineering and Political Science. The eligible courses are listed at the end of this announcement. Note that many of the courses are offered online to enable off-campus students and post-graduate professionals to earn the certificate via distance education. Furthermore, degree-seeking students may count up to two of the certificate courses toward their graduate degree.

Certificate applicants will compose a study plan identifying the four courses they will take to earn the certificate. Nominally, you will take two courses in Nuclear Engineering and two in Political Science; the study plan will be reviewed and approved by the certificate program director. All certificate courses must be completed within four years of enrollment.

How to Apply

Degree-seeking students at NCSU should apply to the program by completing the Certificate Plan Form at https://grad.ncsu.edu/wp-content/uploads/2015/12/grad-cert-plan-data-entry.pdf; send the application with your study plan to the certificate program director (Dr. John Mattingly, jkmattin@ncsu.edu)

Students at other institutions and post-graduate professionals should apply to the program by going to https://grad.ncsu.edu/programs/details/?program=NNSP and clicking “Apply.”

Detailed instructions describing the required application documents are attached. Graduate tuition and fees are listed at https://studentservices.ncsu.edu/your-money/tuition-and-fees/graduate-students/.

Apply Now

This certificate program is an excellent opportunity for you to expand your education in the science and policy of nuclear nonproliferation and contribute to the future implementation of international nonproliferation initiatives.

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Application Documents

This certificate program is open to degree-seeking students at NCSU, students at other institutions of higher education, and post-graduate professionals seeking to expand their educational credentials.

Degree-seeking students at NCSU requesting admission to the certificate program should submit the following documentation to the Certificate program director (jkmattin@ncsu.edu):

1. A Certificate Plan form; see https://grad.ncsu.edu/wp-content/uploads/2015/12/grad-cert-plan-data-entry.pdf. The Certificate Plan must be approved by the Certificate program director.
2. A Study Plan for the certificate, which must be approved by the student's graduate adviser *and* the Certificate program director. The study plan document is attached.

Non-degree-seeking students requesting admission should submit the following documentation:

1. A complete online application must be submitted through the NCSU Graduate School's application system; see https://www.ncsu.edu/grad/applygrad.htm. The application must include a Bachelor degree transcript (an unofficial transcript will be accepted). The applicant will be charged the NCSU Graduate School application fee.
2. A Study Plan for the certificate, which must be approved by the Certificate program director. The study plan document is attached.
3. A current Curriculum Vitae.
4. Non-native English speaking applicants must also submit TOEFL or IELTS scores. Please note that NCSU does not grant visas for international applicants. All international applicants must either (a) already reside in the US or (b) be admitted to the NCSU Distance Education program.

Cost

Program costs can be found via the NCSU's Online and Distance Education page at https://online-distance.ncsu.edu/cost/graduate-tuition-and-fees/.

Certificate Completion

Participants must enroll in courses offered by the certificate program to receive the certificate. Transfer credits will not be accepted.

Upon completion of the four courses identified in the Study Plan, students should submit the attached Completion Record, which must be approved by the certificate program director in order to receive the certificate.

Note that the certificate must be completed in four years or less. Credit for eligible courses taken before enrollment in the certificate program will be accepted provided the courses were taken within four years of program completion.

Degree-seeking students may double-count a maximum of two courses toward both the certificate and their graduate degree if the courses meet the requirements of their degree program.

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Certificate Study Plan

Please record the courses you plan to take to earn the certificate including the course number, course title, and the semester you plan to take each course.

Student name: _____

Student ID: _____

Course number (e.g., NE541, PS560)	**Course title**	**Semester** (e.g., Spring 2020)

- *Degree-seeking students*: if you are enrolled in a degree-seeking program at NCSU (either on-campus or via distance education), please obtain the approval of your graduate adviser and the certificate program director. Also note that a maximum of two courses may be double-counted toward the certificate and your graduate degree.
- *Non-degree-seeking students*: please obtain the approval of the certificate program director; you can enter "Not Applicable" for your graduate adviser. Please also attach your Curriculum Vitae.

You can update your study plan as necessary; please obtain the approval of your adviser (required for degree-seeking studnets) and the certificate program director for any changes.

E-mail your study plan to the program director, John Mattingly, jkmattin@ncsu.edu

Graduate adviser: _____

Signature: _____

Date: _____

Program director: _____

Signature: _____

Date: _____

NC STATE UNIVERSITY

Graduate Certificate in *Nuclear Nonproliferation Science and Policy*

Certificate Completion Record

Please record the courses you completed to earn the certificate including the course number, course title, and the semester you took each course.

Student name: _____

Student ID: _____

Course number (e.g., NE541, PS560)	**Course title**	**Semester** (e.g., Spring 2020)

E-mail your completion record to the program director, John Mattingly, jkmattin@ncsu.edu

Program director: _____

Signature: _____

Date: _____

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Eligible Courses

Consult the NCSU online catalog to confirm course availability in a given semester.

Course*	Semester	Available Online?
NE501: *Reactor Analysis and Design*	Spring	Yes
NE504: *Radiation Safety and Shielding*	Fall	Yes
NE505: *Reactor Systems*	Spring	Yes
NE512: *Nuclear Fuel Cycles*	Fall	Yes
NE520: *Radiation and Reactor Fundamentals*	Fall	Yes
NE521: *Principles of Radiation Measurement*	Fall	No
NE541: *Nuclear Nonproliferation Technology and Policy*	Spring	Yes
NE723: *Reactor Analysis*	Fall	Yes
NE751: *Nuclear Reactor Design Calculations*	Fall (alternating years)	No
NE795: *Characterization of Special Nuclear Material*	Spring (alternating years)	No
PA507: *The Public Policy Process*	Spring (alternating years)	No
PA511: *Public Policy Analysis*	Fall and Spring	No
PS531: *International Law*	Spring (alternating years)	No
PS532: *Global Governance*	Fall	No
PS533: *Global Problems and Policies*	Spring	No
PS539: *International Political Economy*	Fall (alternating years)	No
PS560: *Nuclear Nonproliferation Policy & Process*	Consult catalog	Yes**
PS561: *Nuclear Weapons Strategy and Proliferation*	Consult catalog	Yes**
PS598: *International Security: Policy & Practice*	Spring	No
PS598: *Transnational Illicit Economies*	Fall	No

* For information on Nuclear Engineering (NE) courses, including scheduling and instructor, please contact John Mattingly, jkmattin@ncsu.edu. For information on Political Science (PS) and Public Administration (PA) courses, please contact William Boettcher, william_boettcher@ncsu.edu.

** Certificate students should contact the course instructor to request a distance education section.