TRANSDISCIPLINARY DEVELOPMENTAL SCIENCES CERTIFICATE

The following requirements are in addition to, or further elaborate upon, those requirements outlined in The Graduate School Policy Guide (https://catalogs.northwestern.edu/tgs/academic-policies-procedures/).

Certificate

Total Units Required: 5

Students interested in obtaining the certificate should enroll in the DevSci cluster (https://www.tgs.northwestern.edu/admission/academic-programs/clusters-and-certificates/developmental-origins-of-lifespan-learning/) as well. The membership application is simple. Please send your CV and a 1-2 paragraph summary about your research as a single pdf to Jessica Horowitz the program director. Cluster members have access to special events and DevSci Seed Funds.

Course Requirements:

Students must take 5 courses, one from each of four domains and a fifth course from any of the domains or an elective of their choice as approved by the Training Directors, that are substantially related to developmental science themes. All of the courses already exist and are offered through a range of Northwestern academic units. A single course may not be used to satisfy the requirement for more than one domain. The list below provides examples of suitable courses but is not exhaustive (students can petition the coordinators to include new/different classes when forming a training program, and the committee will carefully review respective syllabi for suitability for a given domain). Domains include topics crucial to the developmental sciences and will provide a breadth of experience for each participating student, to complement the in-depth experience that other components such as the recommended research project provide.

- Domain 1 focuses on conceptual background and early childhood development.
- Domain 2 focuses on a topic of later development (including adolescent, adult and geriatric populations).
- Domain 3 includes developmental psychopathology and atypical development.
- Domain 4 focuses on developmental research methods, including neurodevelopmental methods, and relevant statistics.

Students pursuing the Developmental Sciences Certificate must choose at least 1 class per domain and obtain approval for their course plan from the Institute's Training Directors.

Domain 1: Conceptual background and early childhood development

Course	Title
CLIN_PSY 487-0	Life-Span Developmental Psychology
HDSP 402-0	Child Development and Social Policy
HDSP 413-0	Theories of Human Development
PSYCH 462-0	Cognitive Development
PSYCH 424-0	Behavioral and Neural Basis of Visual Perception

Domain 2: Later development

Course	Title
CLIN_PSY 487-0	Life-Span Developmental Psychology
HDSP 403-0	Adolescent Development
HDSP 404-0	Adult Development and Aging
PSYCH 494-0	Personality Psychology (and its Development)

Domain 3: Developmental psychopathology

Course	Title
CLIN_PSY 466-0	Child Psychopathology
PSYCH 421-1	Psychopathology

Domain 4: Developmental research methods and advanced statistics

Course	Title
CLIN_PSY 426-0	Research Methods I
CLIN_PSY 427-0	Research Methods II
CLIN_PSY 428-0	Research Methods III
CLIN_PSY 429-0	Advanced Research Methodology
HDSP 410-0	Quantitative Methods I: Probability and Statistics
HDSP 411-0	Quantitative Methods II: Regression Analysis
HDSP 412-0	Quantitative Methods III: Empirical Tools for Causal Quantitative Analysis
PSYCH 405-0	Psychometric Theory
PSYCH 451-1	Statistics in Experimental Design
PSYCH 453-0	Linear Models: Correlation & Regression
PSYCH 454-0	Psychological Measurement
PSYCH 494-0	Personality Psychology (and its Development)
PSYCH 497-0	Special Topics in Clinical Psychology (Multilevel Modeling)

Other Certificate Requirements:

Optional co-curricular components
Developmental Science presentations and lectures
Over the course of their graduate studies it is recommended that students:

- Attend the DevSci Brown Bag
  - Events in this series occur once a month and all presentations are related to the developmental sciences. The Brown Bag takes place on both the Chicago and Evanston campuses through videoconferencing.
- Present each year at the annual DevSci Data Blitz/Poster Presentation event
  - The 2.5-hour event will be held each spring, and will include poster presentations by DevSci certificate and cluster members. The event will be attended by DevSci faculty and the broader NU intellectual community will be invited. It will be advertised across campus list-serves.
  - This opportunity is intended to allow for dynamic scholarly interaction between presenters and faculty/student attendees with the hope that this will enhance students' research by offering diverse perspectives and opportunities for dialogue and feedback from a faculty and student group with diverse backgrounds and research topics, but connected by the common focus on developmental science. This event is also intended to foster networking skills that might support the development of job skills as well as future collaborations.
  - Further, students may apply to present a 5-minute data-blitz oral presentation. DevSci leadership will evaluate applications and, through committee, select the presentations each year. These will be selected on the basis of 1) project progress, 2) breadth, and 3)

seniority (with the aim of allowing as many students as possible to benefit from this opportunity).

Developmental Sciences research project

In order to fully benefit from this certificate, it is recommended that students complete a research project in a domain of developmental sciences and/or incorporate developmental science methods into the project under the supervision of a faculty member. Projects should have a transdisciplinary emphasis. Students are encouraged to engage with additional DevSci faculty for this purpose to complement training from their primary laboratory. This optional component will involve incorporating a significant developmental science element into the student's, dissertation project.

Upon enrollment in the certificate, students will work with the DevSci training committee to determine if they will complete a research project and create the plan for their research project. Note: in the long term, students will be encouraged to join DevSci certificate in their 1st or 2nd years of Ph.D. training to allow plenty of time for planning. However, while the certificate is rolling out, we will aim to be inclusive to the broad DevSci cluster membership, and thus students at more advanced levels will be welcome. During the typical dissertation planning process (as it pertains to the students' respective home department), they will meet with the DevSci Training Directors, who will work with the student to identify a DevSci faculty affiliate member who will consult on their dissertation project. The student and primary dissertation mentor (from their home department) will then meet with the DevSci faculty affiliate to generate ideas for how to incorporate developmental questions and methods into the dissertation study. Ideally, this process will take place in the month following the student's qualifying exam (or shortly thereafter). *Note: if the student's primary mentor is already a DevSci affiliate, it is possible to work with an additional DevSci affiliate as an assigned committee member, in an effort to maximize developmental science incorporation and encourage the intra/cross disciplinary nature of the work.*