

TRANSLATIONAL SCIENCE GRADUATE CREDIT CERTIFICATE PROGRAM

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| Person-in-Charge | Gail D. Thomas |
| Program Code | HYTRSC |
| Campus(es) | Hershey University Park |

The primary goal of this certificate is to provide a formal, structured program that allows medical and health care professionals, those wanting to enter the area of health care research, and graduate students seeking a career in a health care related discipline to develop or enhance a successful career in translational science.

Effective Semester: Summer 2023
Expiration Semester: Summer 2028

Admission Requirements

Applicants apply for admission to the program via the Graduate School application for admission (<https://gradschool.psu.edu/graduate-admissions/how-to-apply/>). Requirements listed here are in addition to Graduate Council policies listed under GCAC-300 Admissions Policies (<https://gradschool.psu.edu/graduate-education-policies/>). International applicants may be required to satisfy an English proficiency requirement; see GCAC-305 Admission Requirements for International Students (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-300/gcac-305-admission-requirements-international-students/>) for more information.

Certificate Requirements

Requirements listed here are in addition to requirements listed in Graduate Council policy GCAC-212 Postbaccalaureate Credit Certificate Programs (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-200/gcac-212-postbaccalaureate-credit-certificate-programs/>).

The curriculum includes courses in 4 specific translational science clusters. Students are required to complete 15 credits, including a 10 credit core of required 500-level courses and 5 elective credits. Courses must be selected from the detailed curriculum, or by permission in advance from the certificate director. Courses are available at the Hershey and University Park Campuses enabling the student to continue employment activities or graduate school programs. Students must obtain a B or better in each course.

| Code | Title | Credits |
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| Required Courses | | |
| Select one of the following: | | 3 |
| PHS 520 | Principles of Biostatistics | |
| STAT 500 | Applied Statistics | |
| STAT 501 | Regression Methods | |
| Select one of the following: | | 3 |
| PHS 550 | Principles of Epidemiology | |
| HPA 540 | Epidemiological Applications in Health Services Research | |

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| STAT 507 | Epidemiologic Research Methods | |
| Select one of the following: | | 3 |
| PHS 580 | Clinical Trials: Design and Analysis | |
| STAT 503 | Design of Experiments | |
| STAT 509 | Design and Analysis of Clinical Trials | |
| Select one of the following: | | 1 |
| PHS 500 | Research Ethics for Clinical Investigators | |
| MCIBS 591 | Ethics, Rigor, Reproducibility and Conduct of Research in the Life Sciences | |
| BMS 591 | Biomedical Research Ethics | |
| Electives | | |
| Select 5 credits from the following: | | 5 |
| BBH 505 | Behavioral Health Research Strategies | |
| BIOL 555 | Statistical Analysis of Genomics Data | |
| BMMB 852 | Applied Bioinformatics | |
| BMS 801 | Writing Grant Proposals for Biomedical Research | |
| CTS 590 | Colloquium | |
| HPA 528 | Health Data Analysis for Research | |
| HPA 564 | Research Methods in Health Services Research | |
| HDFS 503 | Human Development Intervention: Analysis of Theories and Approaches | |
| HDFS 516 | Methods of Research in Human Development | |
| KINES 588 | Scientific Writing in Kinesiology | |
| MCIBS 555 | Statistical Analysis of Genomics Data | |
| NUTR 540 | Research Methods | |
| PHS 518 | Scientific Communication | |
| PHS 519 | Patient Centered Research | |
| PHS 521 | Applied Biostatistics | |
| PHS 536 | Health Survey Research Methods | |
| PHS 540 | Decision Analysis for Public Health | |
| STAT 555 | Statistical Analysis of Genomics Data | |

Total Credits 15

Courses

Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

Learning Outcomes

- TS STAT:** Students will be able to apply appropriate statistical principals and analyses to translational science.
- TS EPI:** Students will be able to apply basic epidemiological principals and methods to translational science.
- TS METHODS:** Students will be able to identify, design, implement, and evaluate evidence-based approaches to translational science.
- TS ETHICS:** Students will be able to apply ethical principals and meet high ethical standards in planning, conducting, and reporting of research and protection of human and animal subjects.
- TS COMM:** Students will be able to write scientific reports and journal articles and to give scientific presentations.

Contact

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| Campus | Hershey Med Ctr |
| Graduate Program Head | Gail D Thomas |
| Program Contact | Karen P Shields Penn State College of Medicine P.O. Box 850, MC H147 Hershey PA 17033 kpb2@psu.edu |
| Program Website | View (http://med.psu.edu/translational-science-certificate/) |
| Campus | University Park |
| Graduate Program Head | Gail D Thomas |
| Program Contact | Karen P Shields 600 University Drive Attn: K.Shields MC 147 Hershey PA 17033 kpb2@psu.edu |
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