

SYSTEMS DATA ANALYTICS GRADUATE CREDIT CERTIFICATE PROGRAMS

Person-in-Charge	Raghu Sangwan
Program Code	MDASDA
Campus(es)	Great Valley World Campus

The Graduate Certificate in Systems Data Analytics is a program for students who aim to pursue a career as a System or Risk Analyst where skills will include responsibilities in providing project management for systems implementations, analyzing business process issues design, build, and analyze models, analyzing and determining system risks and examining and interpreting statistical data.

Courses taken in the certificate program may be applied toward a master's degree in Data Analytics, subject to restrictions outlined in GCAC-309 Transfer Credit (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-300/gcac-309-transfer-credit/>). Certificate students who wish to have certificate courses applied towards a graduate degree must apply and be admitted to that degree program. Admission to the graduate degree program is a separate step and is not guaranteed.

Effective Semester: Spring 2024
Expiration Semester: Spring 2029

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.

1. The successful applicant is generally expected to have a minimum combined junior/senior grade-point average of 3.0 (B) on a 4.0 scale.
2. Courses taken in the certificate program may be applied toward Master of Software Engineering degree, subject to restrictions outlined in GCAC-309 Transfer Credit (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-300/gcac-309-transfer-credit/>). Certificate students who wish to have certificate courses applied towards the Master of Software Engineering must apply and be admitted to that degree program. Admission to the Master of Software Engineering graduate degree program is a separate step and is not guaranteed.

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/>).

Code	Title	Credits
Required Courses		
ENGMT 520	Systems Optimization	3
SYSEN 532	Simulation in Systems Engineering: Discrete-Time Systems	3
SYSEN 536	Decision and Risk Analysis in Engineering	3
Total Credits		9

All courses must be completed with a minimum grade of C or better and an overall GPA of 3.0.

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

1. **KNOW** - Analyze problems and develop capabilities with appropriate and meaningful data while using simulation and optimization tools for proper decision making.
2. **APPLY/CREATE** - Examine and interpret statistical data for estimation of risk and their impact on the decision-making process as applied to the technical problems.
3. **APPLY/CREATE** - To introduce the principles, concepts, techniques and tools for visualizing information in large complex data sets.

Contact

Campus	Great Valley
Graduate Program Head	Raghu Sangwan
Director of Graduate Studies (DGS) or Professor-in-Charge (PIC)	Adrian Sorin Barb
Program Contact	Sharon V. Patterson 30 E. Swedesford Rd. Malvern PA 19460 svp40@psu.edu (610) 648-3318
Campus	World Campus
Graduate Program Head	Raghu Sangwan
Director of Graduate Studies (DGS) or Professor-in-Charge (PIC)	Adrian Sorin Barb
Program Contact	Sharon V. Patterson 30 E. Swedesford Rd. Malvern PA 19460 svp40@psu.edu (610) 648-3318