

MASTER OF SCIENCE IN APPLIED DATA ANALYTICS

Description and Outcomes

The Master of Science in Applied Data Analytics program was designed to provide analytics and other domain professionals with advanced-level knowledge in data analytics skills. In this program, you will apply current statistical theories, tools, and processes to curate, manipulate, and present various forms of data. You will master the ability to effectively process data that supports data-informed decisions. You will gain skills across the analytics life cycle, which include data discovery, data aggregation, planning of the data models, data model execution, communication of the results, and operationalization. Whether you intend to apply analytics skills to your current role, undertake a new specialized analytics position, or improve your decision-making by becoming a more analytics-informed leader, this program will help prepare you for those goals.

Concentrations

The program provides you with the option of selecting a concentration, in addition to the core curriculum requirements. You must have sufficient elective credits remaining to be eligible to add a concentration. The concentrations include Amazon Web Services (AWS) cloud technologies, artificial intelligence (AI), cybersecurity, and project management.

Program Length

The Master of Science in Applied Data Analytics program consists of a minimum of 52 quarter credit hours. Upon successful completion of the program, you will be awarded a master of science degree.

Program Outcomes

Discipline-Specific Outcomes

1. **Methods and Tools:** Evaluate appropriate methods and tools to be applied to analytics-based challenges and opportunities in a given setting.
2. **Data Transformation Skills:** Transform data sets to provide actionable insights using AI, Machine Learning, statistical and analytics software, e.g., Python, R, SQL, and Tableau.
3. **Data Analytics Life Cycle:** Master the steps in the analytics life cycle from data curation and manipulation through presentation of findings and operationalization.
4. **Data Infrastructure Skills:** Devise infrastructure systems to ensure the quality, security, and privacy of data.

Professional Competencies

In addition to the discipline-specific outcomes, professional competencies are integrated throughout your academic program. You can review the professional competencies associated with your academic program in the Professional Competencies (<https://catalog.purdueglobal.edu/graduate/professional-competencies/>) section of this Catalog.

Program Availability

For program availability, please refer to the U.S. State and Other Approvals (<https://catalog.purdueglobal.edu/policy-information/university-information/accreditation-approvals-memberships/>) section

and Program Availability Information (<https://www.purdueglobal.edu/catalog-program-availability-info.pdf>).

Policies


Certification, State Board, and National Board Exams

Certification and licensure boards have state-specific educational requirements for programs that lead to a license or certification that is a precondition for employment. Prospective and current students must review Purdue Global's State Licensure and Certifications (<https://www.purdueglobal.edu/about/accreditation/licensure-state-authorizations/>) site to view program and state-specific licensure information.


Licensure-track programs may limit enrollment to students in certain states; please see Purdue Global's Program Availability Information (<https://www.purdueglobal.edu/catalog-program-availability-info.pdf>) to determine enrollment eligibility.

You are responsible for understanding the requirements of optional certification exams. Such requirements may change during the course of your program. You are not automatically certified in any way upon program completion. Although certain programs are designed to prepare you to take various optional certification exams, Purdue Global cannot guarantee you will be eligible to take these exams or become certified. Your eligibility may depend on your work experience, completion of education and/or degree requirements, not having a criminal record, and meeting other certification requirements.

Degree Plan

The  icon appears in the title of traditional courses that are also available as a set of module courses. Module course availability may be limited to certain academic calendars. See Course Types (<https://catalog.purdueglobal.edu/policy-information/university-information/approach-to-learning/>) for information about module courses.

Program Requirements

Code	Title	Credits
Core Requirements		
IN501	Fundamentals of Computer Programming	4
IN502	Python Statistical Tools	4
IN503	Introduction to Machine Learning	4
IN504	Advanced Applications of Python	4
IN506	Data Visualization and Knowledge Representation	4
IN507	Data Curation	4
IT527	 Foundations in Data Analytics	4
MM555	Applied Statistics	4
IN599	Master's Capstone in Data Analytics	4
Total Core Requirements		36
Elective Requirements		
IT Electives (see below)		16
Total IT Elective Requirements		16
TOTAL CREDITS		52

Concentration Requirements


Concentration courses are completed within the IT electives requirement of the degree plan.

Students in this program are not required to select a concentration.





Amazon Web Services (AWS) Cloud Technologies

Code	Title	Credits
IN515	AWS Academy Cloud Foundations	4
IN516	AWS Academy Cloud Architecting	4
IN518	AWS Academy Data Analytics Lab	4
IN519	AWS Academy Cloud Operations	4
TOTAL CREDITS		16

Artificial Intelligence (AI)

Code	Title	Credits
IN570	Value Creation Through Artificial Intelligence and Data Analytics	4
IN571	Human-Centric Approach to the Application of Artificial Intelligence	4
IN572	Leading in an Artificial Intelligence-Driven Society	4
IT504	 Managing Information Technology in a Business Environment	4
TOTAL CREDITS		16

Cybersecurity

Code	Title	Credits
IT537	 Introduction to Cybersecurity	4
IT543	 Cryptography Concepts and Techniques	4
IT550	 Computer Forensics and Investigations	4
IT591	 IT Security Auditing and Assessments	4
TOTAL CREDITS		16

Project Management

Code	Title	Credits
GM591	Strategic Project Selection and Initiation	4
GM592	Project Planning and the Project Plan	4
GM593	Project Execution With Monitoring and Control	4
GM594	Project Closing, Ethics, and Professional Responsibilities	4
TOTAL CREDITS		16