

# HEALTH DATA SCIENCE, GRADUATE CERTIFICATE

In today's rapidly evolving healthcare landscape, data is the new catalyst for innovation and improved patient outcomes. The Certificate in Health Data Science offers you a unique opportunity to become a leader at the intersection of health, statistics, and computer science. This program is designed for healthcare professionals, data enthusiasts, and graduate students eager to harness the power of data to drive transformative change in healthcare settings.

## Why Choose This Program?

**Cutting-Edge Curriculum:** Gain hands-on experience with real-world health data through courses in statistical analysis, predictive modeling, data visualization, and more. Learn how to navigate the complexities of biomedical data and translate insights into actionable strategies.

**Interdisciplinary and Collaborative Learning:** Benefit from a rich academic environment that bridges public health, informatics, and data science. Our curriculum is bolstered by partnerships with leading institutions—including the Medical College of Wisconsin and Marquette University—ensuring you access to diverse expertise and resources.

**Flexible Learning Options:** With courses available online, in-person, and in hybrid formats, the program is tailored to meet the demands of busy professionals and full-time students alike.

**Career-Ready Skills:** Prepare to excel in high-demand roles such as Biomedical Data Scientist, Health Informatics Specialist, Clinical Data Analyst, and more. Our emphasis on technical proficiency, leadership, and effective communication equips you to drive change in healthcare organizations and research institutions.

**A Program with Purpose:** Join a mission-driven initiative that not only advances your career but also contributes to the broader goals of improving health outcomes, reducing disparities, and fostering innovation in public health.

Whether you're looking to deepen your expertise or pivot into a rapidly growing field, the Certificate in Health Data Science is your gateway to making a meaningful impact in the world of healthcare. Embrace the future of health innovation and empower yourself with the tools to transform data into life-saving decisions. Discover your potential—apply today and be part of the new wave of health data leaders.

## Admission Requirements

### Application Deadlines

Application deadlines vary by program, please review the application deadline chart (<http://uwm.edu/graduateschool/program-deadlines/>) for specific programs. Other important dates and deadlines can be found by using the One Stop calendars (<https://uwm.edu/onestop/dates-and-deadlines/>).

### Application

- Admission to a graduate certificate program requires formal student application through the Graduate School admissions application (<https://uwm.edu/applygrad/>) system, including the required admissions application fee.

- Certificate programs will inform the Graduate School of their admission recommendation for an applicant. The final admission decision is made by the Graduate School.
- Early application to the certificate program is recommended; late application is possible, but may incur delays for certificate conferral related to time required for credit tracking.
- Applicants must possess a baccalaureate degree and have a minimum 2.75 cumulative undergraduate grade point average to be admitted into a certificate program.

## Admission Requirements and Procedures

Admission to the certificate program requires (1) a minimum G.P.A. for admission to the certificate program is 3.0 (4-point scale) in prior bachelor's degree (or cumulative credits after admission to a dual bachelor-master's degree program); or (2) concurrent enrollment in a Graduate or Professional degree program; or (3) completion of a Graduate or Professional degree program.

Applications for admission to the program will be made to the Program Coordinator.

## Credits and Courses

To complete the requirements for the Certificate, students must complete 15 credits by taking one course in five topical areas. The courses are offered by UWM, MCW and Marquette University; at least eight credits must be taken through UWM. Courses taken toward other degree programs may be used to meet the Certificate requirements. [Note: O = online, I = in person, H = hybrid]

Code	Title	Credits
<b>Area 1: Introduction to Healthcare, Digital Health, and the Use of Medical Data</b>		<b>3</b>
HI 700	Introduction to Health Care Informatics (O, I)	
HI 740	Introduction to Biomedical Database Applications (O, I)	
INFOST 582G	Introduction to Data Science (O, I)	
NURS 773	Applied Health Informatics (O, I)	
<b>Area 2: Statistical Analysis</b>		<b>3</b>
PH 702	Introduction to Biostatistics (I)	
KIN 702	Statistical Analysis in the Health Sciences (H)	
NURS 720	Biostatistics and Applications for Nursing Practice (O, I)	
MCW: Clinical Statistics (I)		
<b>Area 3: Regression, Multivariate Analysis, Artificial Intelligence, and Machine Learning</b>		<b>3</b>
HI 745	Big Data and Machine Learning in Health and Beyond (O, I)	
PH 711	Intermediate Biostatistics (I)	
PH 759	Intro to Regression for Understanding the SDOH (I)	
<b>Area 4: Data Visualization</b>		<b>3</b>
Marquette: COSC 4500/5500: Visual Analytics (I, O)		
PH 718	Data Management and Visualization in R (O)	
<b>Area 5: Capstone: Applications of Data Science</b>		<b>3</b>
MCW Practicum in Clinical Applications of Data Science (I, O)		

PH 800	Capstone in Public Health (I)
HCA 866	Healthcare Leadership (I, O)
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<b>Total Credits</b>	<b>15</b>

## Additional Requirements

### Allowance for Transfer Credit

The Certificate allows for up to 7 credits of the required 15 credits to be transfer credits from non-UWM institutions.

### Grade Point Average Requirement

The overall GPA in the required certificate courses must be at least 3.0.

### Time Limit

The certificate must be completed within 3 years from enrollment in the program.

### Articulation with Degree Programs

1. Credits and courses required for a certificate may double count toward meeting UWM graduate degree requirements subject to the following restrictions:
  - Degree programs must approve the courses from certificates that can double count toward the degree.
  - All credits taken in completion of certificate requirements may count towards a UWM graduate degree as long as they do not contribute more than 90% of the total credits needed to obtain the degree. (Note: Students in PhD programs must still complete the minimum residency requirements)
  - Certificate courses used toward meeting degree requirements must be completed within the time limit for transfer credit.
2. Courses completed for a degree may be counted toward a subsequent certificate, subject to all certificate policy requirements.
3. A course may count toward no more than one certificate and one degree.
4. Students may not earn a certificate subsequent to a concentration in the same area.