# DATA CURATION, GRADUATE CERTIFICATE

## Graduate Certificate in Data Curation

The Graduate Certificate in Data Curation will provide an Information Science-centered focus on data issues, particularly in the representation, organization, storage, and retrieval of large amounts of data where expertise in these areas is needed. Data professionals are needed to fulfill a variety of functions, including data management, curation, and stewardship in academic and industry settings.

Data curators work alongside data engineers and data scientists to design, implement, and apply data management techniques to relevant data sets. Graduates of the program will gain the skills to identify reliable data sources, analyze data in various formats, and design and maintain big data and data analytics systems using the principles of data mining, data modeling, and data architecture.

## 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

The minimum G.P.A. for admission is 2.75 (4 point scale) in a prior bachelor's or postbaccalaureate degree (or cumulative credits after admission to a dual bachelor-master's degree program.) Preference will be given to those students who have a baccalaureate degree in information sciences, computer information systems, computer science, engineering, statistics, or a related field. Students with sufficient background gained through work experience or professional training in information technologies, such as networks, web services, and database development, will also be considered for admission to the program.

In addition to the Graduate School application materials, applicants must submit a one to two page reason statement outlining their background and their educational and professional goals.

Those who have neither of the aforementioned qualifications will be encouraged to take the following prerequisites, or their equivalents, before taking related courses:

| Code | Title | Credits |
|---|---|---|
| INFOST 240 | Web Design I | 3 |
| INFOST 410 | Database Information Retrieval Systems | 3 |
| INFOST 440 | Web Application Development | 3 |

If taken, these courses must have been completed within the last five years with a grade of B or better (B- not acceptable).

## Credits and Courses

To complete the requirements for the data curation certificate, students must complete:

| Code | Title | Credits |
|---|---|---|
| **Required** | | |
| INFOST 582G | Introduction to Data Science | 3 |
| INFOST 771 | Data Curation | 3 |
| **Electives** | | |
| Select a minimum of 9 credits from the following: | | 9 |
| INFOST 465G | Legal Aspects of Information Products and Services | |
| INFOST 655G | Information and Records Management: | |
| INFOST 660G | Information Policy | |
| INFOST 661G | Information Ethics | |
| INFOST 687G | Data Analysis for Data Science | |
| INFOST 691G | Special Topics in Information Science: (with relevant topic) | |
| INFOST 714 | Metadata | |
| INFOST 717 | Information Architecture | |
| INFOST 719 | Advanced Topics in Information Organization (with relevant topic) | |
| INFOST 785 | Database Management Systems for Information Professionals | |
| **Total Credits** | | **15** |

Relevant courses from other units on campus will also be considered, including:

| Code | Title | Credits |
|---|---|---|
| BUS ADM 749 | Data and Information Management | 3 |
| COMPSCI 411G | Machine Learning and Applications | 3 |
| COMPSCI 425G | Introduction to Data Mining | 3 |
| COMPSCI 557G | Introduction to Database Systems | 3 |
| COMPSCI 723 | Natural Language Processing | 3 |
| COMPSCI 744 | Text Retrieval and Its Applications in Biomedicine | 3 |
| HI 745 | Big Data and Machine Learning in Health and Beyond | 3 |
| HI 760 | Biomedical and Healthcare Terminology and Ontology | 3 |

# Additional Requirements

## Transfer Credit

No more than 20% of the required credits may be taken at an institution other than UWM. These courses are subject to Graduate School transfer policy and must be approved by the director of the certificate program.

## Grade Point Average Requirement

A minimum cumulative 3.00 grade point average in certificate courses taken at UWM is required.

## 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.

## Time Limit

Certificate program time limits shall be established as follows:

- 18 or fewer credits/Three years from initial enrollment in the certificate sequence.
- 19 or more credits/Four years from initial enrollment in the certificate sequence.

For certificates that are designed as add-ons to degree programs and are awarded concurrent with the degree, the time limit shall be the same as that of the degree program.